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EYE COMFORT

CURTIS LIGHTING

ALL LIGHT
SHOULD BE
"J"

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CCA

STUTTGART 2000
MAY 1998

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JOHN WANAMAKER STORE, N. Y. C.

CURTIS MODERN LUMINAIRES



HANDBOOK "J"

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Pendant Indirect Luminaires

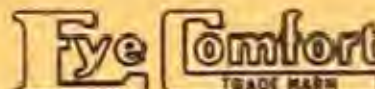
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INDIRECT LIGHTING

HUMANKIND, inspired by the Science of Seeing, rightfully accepts indirect illumination as the correct method of eye-conserving lighting. The commercial world admits indirect lighting to be a prime step toward better business.

★ THIS UNIVERSAL RECOGNITION and approval could have been only partially anticipated by Augustus D. Curtis in 1907 when he made public his discovery of indirect lighting. Before an assembly of the American Society of Illuminating Engineers at his Chicago home, Mr. Curtis demonstrated the practicability of this mode of lighting from concealed sources . . . its limitless possibilities in the world-wide search for an ideal, artificial illumination.

★ FROM THE ORIGINAL EQUIPMENT used in the first demonstration—an inverted mirrored glass X-Ray reflector shielding a bare lamp—down to the present-day artistically conceived indirect luminaires, scientifically designed for perfect light control, Curtis Lighting has constantly maintained the ultimate purpose of economically producing the finest, efficient equipment for  Lighting.

STAFFED with Illuminating Engineers and Designers outstanding in their field, and enjoying the design collaboration of Walter Kantack, Curtis Lighting retains world-wide leadership in the planning and executing of modern lighting installations . . . in the designing and manufacturing of unusual, beautiful lighting elements. In addition to the main plant in Chicago, factories in Canada and Europe and an international distributing organization make Curtis products available everywhere through the electrical trade.

★ "Before" Curtis Indirect Lighting ★



BEFORE

The Sun Life Insurance Co., Baltimore. Old-style glass bowl fixtures which provided only 5 foot-candles of glaring light . . . observe next page.

BECAUSE employers have shown intimate progressive interest in the bettering of seeing conditions in offices these interiors offer an excellent opportunity to observe the rapid strides in "lighting for seeing." Above may be seen the "Before" view of an office in which the inadequacy and poor quality of the old-style lighting is immediately apparent. Desk tops—the seeing and working area—are obscured in half-light. Eyes focused on letters and books in this light poverty are strained and fatigued. Filing systems are slowed up. Work cannot be done at top efficiency and speed.

GLARE—the arch-enemy of better sight—is unavoidable from obsolete glass bowls. This characteristic of raw and improperly controlled light is vitally injurious to sight, health, disposition, working efficiency.

★ "After" Curtis Indirect Lighting ★



The Sun Life Insurance Co., Baltimore. Seventy-five "Winner" luminaires provide 40 foot-candles . . . spaced on 8'6" centers. Ceiling height 12'.

AFTER

REPLACING the old lighting in the Sun Life Insurance Company of America, is this modern indirect system utilizing Curtis "Winner" units (See page 6). Pleasant and confident is a person's entrance into an office flooded with unobtrusive, evenly diffused light.

Every type of business routine is speeded up in accuracy and efficiency because indirect lighting spurs effortless seeing. Employees are unrestrained from doing close eye-work over a long period of time. The humanitarian and commercial benefits accruing to businesses subscribing to Curtis indirect lighting are indispensable. An energetic spirit of enjoyment in working results from better working conditions . . . better lighting improves all working conditions where eyes are concerned.

★ EYE-COMFORT LUMINAIRE

Equipped with X-Ray Reflector

"Winner"

An indirect luminaire embodying simplicity and trimness in style with maximum lighting efficiency, "Winner" is recommended for those interiors where in critical seeing (close eye-work) is performed . . . especially offices, schools, drafting rooms. X-Ray Reflector insures permanent, scientific light control.

Exterior finish — Bronzed Aluminum — contrasting with the highly polished band.

500 or 300 Watt

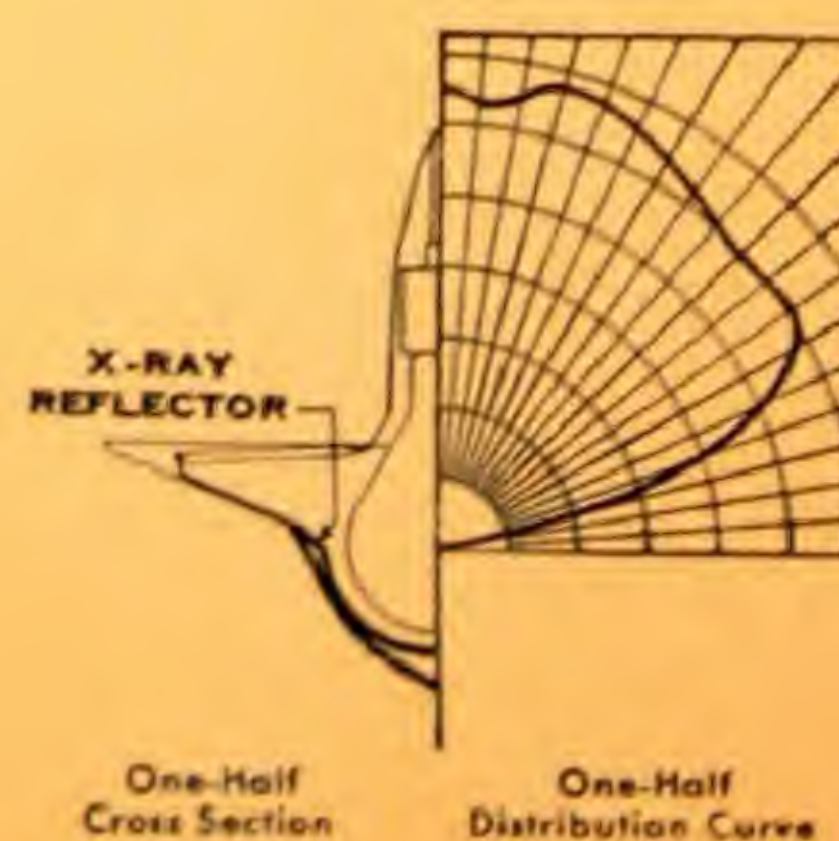
Cat. No. 5090. Code "Winner"

Bowl: diam. $19\frac{1}{2}$ ", depth 7". Susp. 36".

(Installation photograph page 5)



"WINNER"



With Lunax Reflecting Surface

"Trump"

Tailored lines and the shallow bowl of the "Trump" design make it particularly suited to commercial interiors of low or medium ceiling height. Two slight offsets in the center portion of the bowl soften the contour. Lunax reflecting surface is durable and easy to maintain. Made of Aluminum. Finished Satin Aluminum.

200 Watt

Cat. No. 1192. Code "Euchre"
Bowl: diam. $13\frac{3}{4}$ ", depth $4\frac{1}{8}$ ".
Susp. 30".

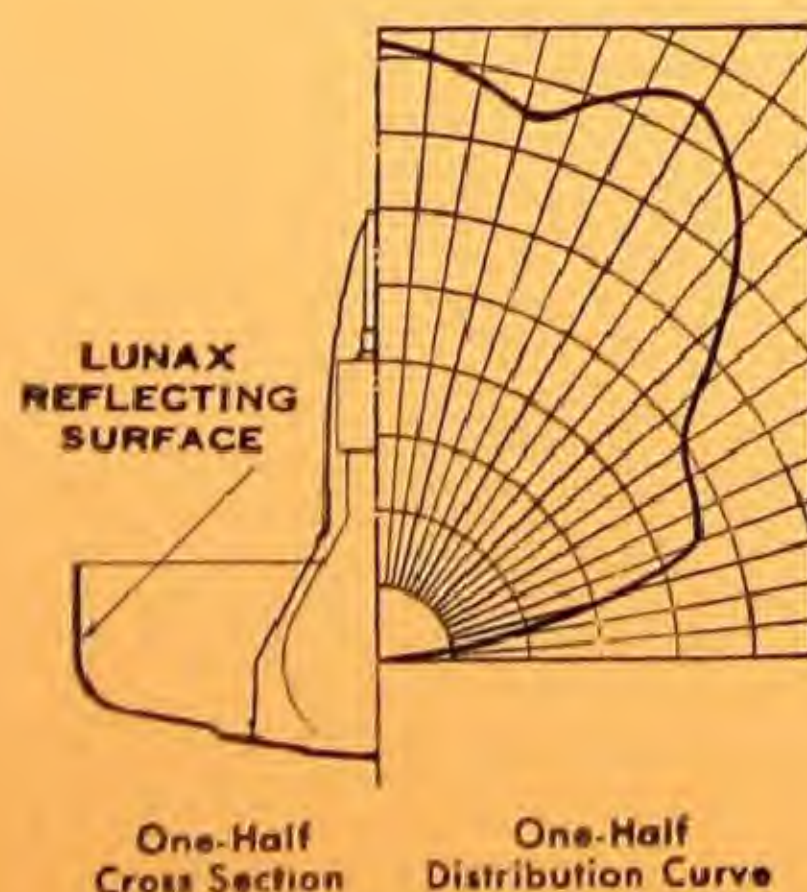
500 or 300 Watt

Cat. No. 1190. Code "Trump".
Bowl: diam. 17", depth $5\frac{1}{8}$ ". Susp. 36".

750 to 1500 Watt

Cat. No. 1194. Code "Casino".
Bowl: diam. 24", depth $7\frac{1}{2}$ ". Susp. 42".

(Installation photograph page 8)



★ *Lighting the Small Store* ★



Joseph Jay Hat Shop, Philadelphia, Pa. Indirectly illuminated from "Trump" luminaires on 10' centers. Interior 90' long, 11' wide. Ceiling 13'.

SPECIALTY STORES literally defeat competition by properly controlled high intensity lighting. Their interiors, as well as show windows, present a brilliant merchandise picture. This brilliance attracts customers and gives them a definite impression of style leadership formerly associated only with more pretentious or larger stores.

Curtis indirect lighting "enlarges" this one-aisle millinery shop. The narrowness of this particular interior is minimized by evenly lighting the entire length . . . every fitting table becomes an actual selling center.

It is especially desirable to have millinery becoming under daylight. The comfortableness and diffusion of Curtis indirect lighting closely simulate daylight and insure satisfactory purchasing from a style and color viewpoint.



"Edge-Ray" Light a Beauty Salon



Carson Pirie Scott & Co., Chicago. "Edge-Ray" luminaires lend lighting luxury to this modern interior . . . color scheme, salmon, pale blue, ivory.

INTERNATIONAL RECOGNITION of the beauty of "Edge-Ray" luminaires has been echoed in the prominence of those stores adopting "Edge-Ray" lighting. In addition to the many other departments in this particular store utilizing "Edge-Ray" lighting, dignity and charm have been added to the new beauty salon with indirect illumination from these graceful luminaires. This "shop within a shop" is modern in every sense of the word and attracts a discriminating clientele.

The selling success of store services, as well as merchandise, is largely dependent on the efficiency and character of the illumination. Individual departments reflect the caliber of the store as a whole . . . indirectly lighting these departments tends to make them successful within themselves and adds immeasurably to the entire store.

★ "EDGE-RAY" LUMINAIRE

With Lunax Reflecting Surface

Luminaires incorporating the "Edge-Ray" principle
manufactured under U. S. Patent 2,075,206



"EDGE-RAY"

"Edge-Ray"

THE BEAUTY of "Edge-Ray" luminaires cannot be adequately described or pictured. Only the eye can appreciate its unusual design and lighting effectiveness. Soft luminous sheen swathes the silvery aluminum bowl exterior . . . this lighted effect on the bowl results from an exclusive Curtis feature. Atop the bowl is a reflector ring which redirects a bit of light downward onto the exterior (see diagram page 23) and the concentric vertical rings of

the bowl pick up this light. Viewed from below, "Edge-Ray" luminaires effect an interesting array of softly lighted circles. Decorative color may be added to "Edge-Ray"—see page 23. These handsome lighting units are made of Lunax Aluminum, finished Lustrous Aluminum.

200 Watt

Cat. No. 1200. Code "Edge-Mere".
Bowl: diam. 17", depth 6". Susp. 30".

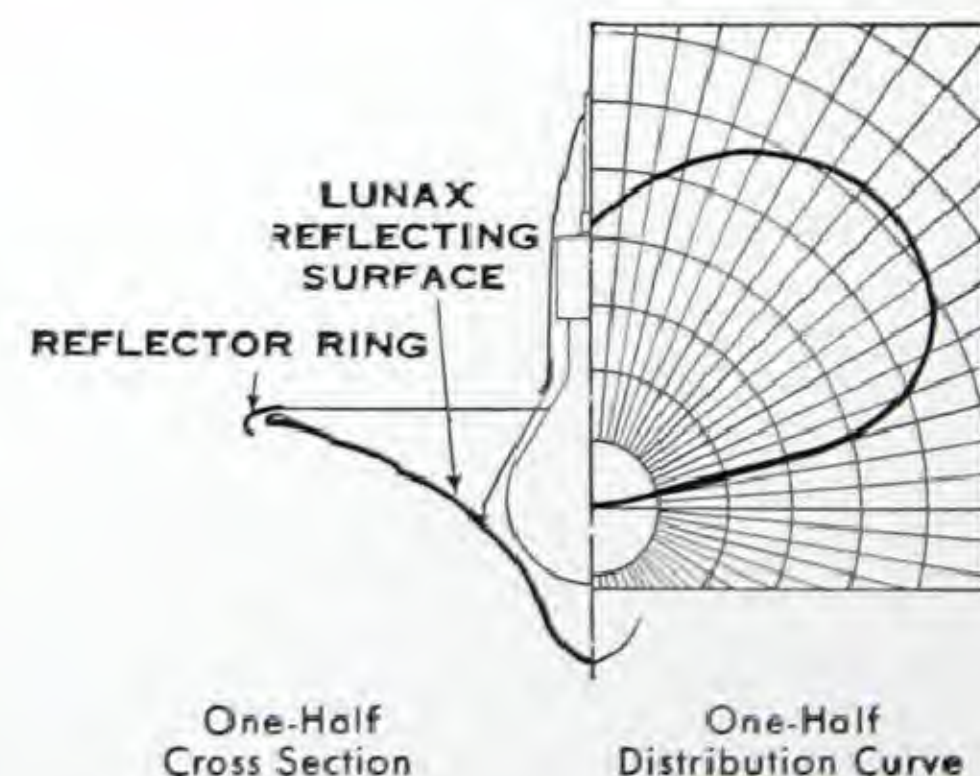
500 or 300 Watt

Cat. No. 1250. Code "Edge-View".
Bowl: diam. 21 $\frac{3}{8}$ ", depth 8". Susp. 36".

750 to 1500 Watt

Cat. No. 1270. Code "Edge-Wood".
Bowl: diam. 27 $\frac{1}{2}$ ", depth 11". Susp. 48".

(Installation photos. pages 1, 9, 21.)



"L'OR-RAY" LUMINAIRE



"L'Order"

"L'OR-RAY" is the group name (see page 18) given those Curtis luminaires for use with Silvered Bowl lamps.

The refined lines of "L'Order" harmonize with modern architectural schemes. This design features the exclusive Curtis "Edge-Ray" principle . . . soft light is redirected back onto the bowl enriching the lustrous aluminum texture of the body. Decorative color may be added to the bowl exterior of "L'Order". See page 23. Silvered Bowl lamps may be conveniently replaced through the bottom. Made of Lunax, Finished Lustrous Aluminum.

200 Watt

Cat. No. 121. Code "L'Orb".
Bowl: diam. 17", depth 3 $\frac{3}{4}$ ". Susp. 30".

500 or 300 Watt

Cat. No. 151. Code "L'Order".
Bowl: diam. 21 $\frac{3}{8}$ ", depth 5 $\frac{1}{8}$ ".
Susp. 36".

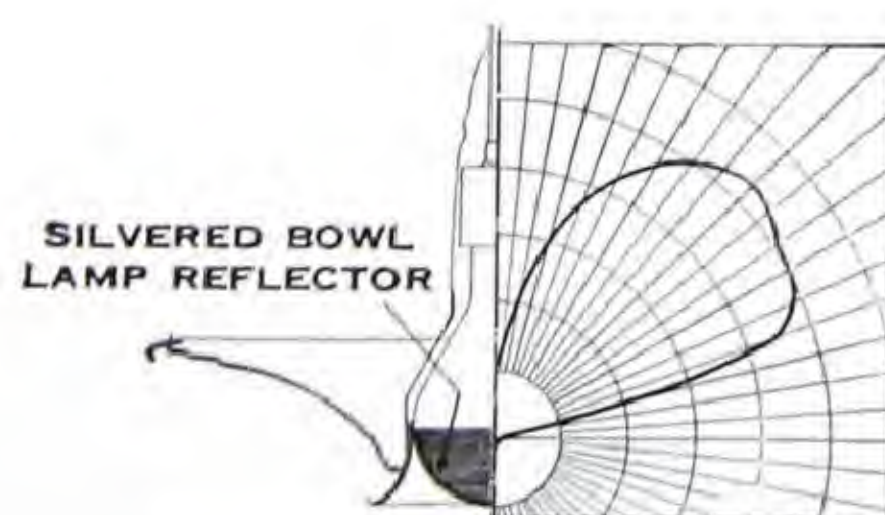
750 or 1000 Watt

Cat. No. 171. Code "L'Orbital".
Bowl: diam. 25 $\frac{1}{2}$ ", depth 7 $\frac{1}{2}$ ".
Susp. 42".

(Installation photograph page 12)

For use with Silvered Bowl Lamp

"L'Or-Ray" Luminaires are manufactured under U. S. A.
Patent 1,609,870. Other patents pending.



One-Half
Cross Section

One-Half
Distribution Curve



★ Modern Lighting... Modern Furniture ★



Troy Sunshade Co., American Furniture Mart, Chicago.
"L'Or-Ray" luminaires (No. 151) are spaced on approximate centers of 15' by 10' . . . 20 foot-candles result.

WHAT IS THERE that better expresses timely trends than chrome-steel furniture? This boldly styled, gayly colored metal furniture best exemplifies streamlining influences in modern products.

The perfect complement to this inviting display room is the indirect illumination provided by Curtis "L'Order" luminaires. This uniformly diffused lighting flatters the colors and textures of the upholstery materials . . . gives the cold metal framing a friendly feeling. Attractive furniture displays are difficult to achieve. The bulk and shape of the items necessarily spreads the display over considerable floor area. By effectively illuminating the **entire** sales space each grouping of furniture commands attention. Prominent furniture manufacturers showing in the American Furniture Mart use Curtis luminaires to enhance and illumine their display rooms.

★ *Lighting a Bank Interior* ★



Central National Bank, Cleveland—Ten Curtis "Carnelian" luminaires equipped with X-Ray Reflectors, fitted with 500-watt lamps.

BANKING is exacting business. Eye-work involving precision, thoroughness, and speed, is required in every transaction. Only the most scientifically correct illumination is suitable for banking interiors.

In Cleveland the Central National Bank was modernized by merely repainting ceiling and upper walls and relighting with Curtis luminaires "Carnelian." Over all the banking counters is spread a quantity of light which immeasurably facilitates monetary handlings by the employees. They are confident of the accuracy of each transaction. Generously lighted institutions invite new business and bespeak leadership in the community. Whether modern or traditional in design every interior may be appropriately and properly illuminated with Curtis equipment.

★ EYE-COMFORT LUMINAIRES

Fitted with X-Ray Reflectors

Maximum indirect lighting efficiency results from luminaires fitted with X-Ray Reflectors. The designs shown here are pleasing in contour and are appropriate for offices, schools, drafting rooms and other commercial interiors.



One-Half Cross Sections and One-Half Distribution Curves

"Carnelian"

500 or 300 Watt

Bowl dia. 19 1/4", depth 5 5/8". Susp. 36"

Cat. No. 7200 * Code "Carnelian"
Stem Hanger. Made of Steel, finished Washable Ivorytone.

Cat. No. 7202 Code "Cosmos"
Stem Hanger. Made of Brass, finished Two-tone Bronze.

Cat. No. 7210 Code "Cactus"
Chain Hanger. Made of Steel, finished Washable Ivorytone.

750 to 1500 Watt

Bowl dia. 26", depth 7 5/8". Susp. 42"

Cat. No. 7250 Code "Argus"
Stem Hanger. Made of Steel, finished Washable Ivorytone.

Cat. No. 7252 Code "Lotus"
Stem Hanger. Made of Brass, finished Two-tone Bronze.

Cat. No. 7260 Code "Argon"
Chain Hanger. Made of Steel, finished Washable Ivorytone.

(Installation photograph page 13)

"Muriel"

500 or 300 Watt

Reeded stem hanger standard for all units.

Bowl dia. 18", depth 7 1/4". Susp. 36"

Cat. No. 5871 Code "Muriel"
Made of Aluminum, finished Polished Aluminum.
Cat. No. 5872 Code "Sorel"
Made of Brass, finished Two-tone Bronze.

Cat. No. 5871 Code "Muriel"
Made of Aluminum, finished Polished Aluminum.



"CARNELIAN"



"MURIEL"

"Lapis"

500 or 300 Watt

Bowl: diam. 14", depth 6⁵/₈" Susp. 36".
 Cat. No. 6110 has stem hanger; Code "Lapis".
 Cat. No. 6100 has chain hanger; Code "Opal".

750 to 1500 Watt

Bowl: diam. 19", depth 8¹/₂" Susp. 42".
 Cat. No. 6200 has chain hanger; Code "Plasma".
 Cat. No. 6210 has stem hanger; Code "Moonstone".

(Installation photograph page 16)

"Berod"

500 or 300 Watt

Bowl: diam. 18", depth 6⁷/₈" Susp. 36".
 Cat. No. 7400 has chain hanger; Code "Beryl".
 Cat. No. 7410 has stem hanger; Code "Berod".

Fitted with X-Ray Reflectors

Very often it is desirable to match the finish of Curtis Luminaires with ivory walls or ceiling. For that reason, the styles "Lapis" and "Berod", also "Carnelian" (page 14), are available in Washable Ivorytone finish.



One-Half Cross Sections and One-Half Distribution Curves

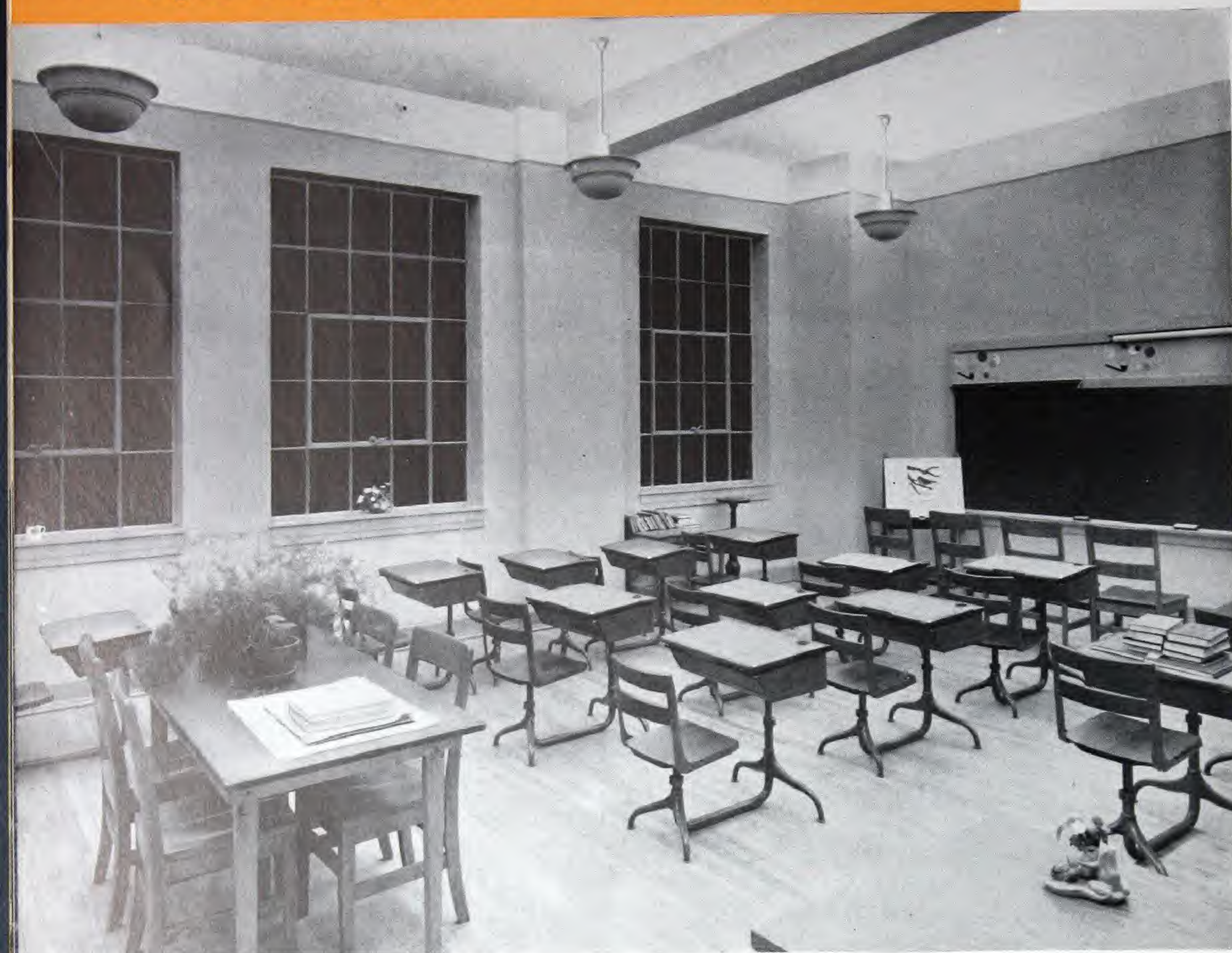


"LAPIS"



"BEROD"

★ Sight Saving with Curtis Lighting ★



In Copley, Ohio . . . this sight-saving classroom is provided with 50 foot-candles of light from six totally indirect Curtis units ("Lapis") with 750-watt lamps.

THAT SIGHT-SAVING CLASSES are being established in rural as well as metropolitan areas is a tribute to the foresight of educators everywhere. Invariably indirect lighting is the method adopted in these school rooms where proper lighting for young eyes is so essential.

Benefits of Curtis indirect lighting in the school room are vitally influential in the progress of the students. Equally good visual conditions throughout the room—near and away from the windows—give all eyes an equal chance to absorb learning which is the very foundation of living.

Above is shown a centralized sight-saving room serving children with defective vision from five counties. These students are aided through high-intensity evenly diffused lighting . . . six totally indirect units, each equipped with one 750-watt lamp, provide fifty-foot candles—a seeing level

considerably better than average modern classrooms. The seeing level is controlled by a photo electric cell . . . daylight, when adequate, is utilized and the indirect lighting is automatically switched on and off to maintain this high lighting level. By enabling children with defective vision to see as well as other students, a definite social good is achieved . . . they are allowed to progress at a normal pace, their personalities are not handicapped by inferiority complexes—a serious hindrance to the mental and social development of a child. Fine scholastic records definitely reflect the aid given these children by better lighting.

★ Good Office Lighting Improves Business ★



Remington Rand, New York City. Curtis Lunax luminaires provide the glareless evenly diffused lighting so highly desirable in offices.

MANUFACTURERS of modern business equipment value good lighting for a demonstrating agent as well as a direct selling agent. The correct seeing qualities of Curtis indirect lighting enable prospective purchasers of up-to-date office machines to see how they can get "more for their money" . . . machines will hum at a quicker, surer pace when operators can see with a minimum amount of effort. Confidence will replace hesitancy and the production of the business machines will increase many fold. Investments in modern lighting and office equipment are paying investments.

When an entire office is adequately lighted maximum convenience is allowed in the arrangement of the furnishings. Desks may be relocated, files changed, business machines used everywhere. The same degree of seeing efficiency will prevail everywhere under this type of illumination.

★ "L'OR-RAY" LUMINAIRES

For use with Silvered Bowl Lamps

Curtis luminaires intended for use with Silvered Bowl Lamps are high quality in design, fabrication, lighting efficiency. They are made of Lunax, non-tarnishing, aluminum. The lamp is a self-contained indirect light source. Maintenance and relamping are made easy by relamping through the bottom opening of the bowl.

"L'Or-Ray" Luminaires are manufactured under U. S. A. Patent 1,609,870. Other patents pending.



One-Half Cross Sections and One-Half Distribution Curves

"L'Oracle"

The under soffit of this well-designed luminaire is subtly illuminated and the effect gives delicate proportions to the bowl. Satin Aluminum—a distinctive grained finish with polished highlights—is used on the bowl exterior.

500 or 300 Watt

Cat. No. 154 Code "L'Oracle"
Bowl: diam. 19 1/4", depth 3 7/8".
Susp. 36".

750 or 1000 Watt

Cat. No. 174 Code "L'Oracular"
Bowl: diam. 24 1/2", depth 5 1/2".
Susp. 42".

(Installation photograph page 2)

"L'Orion"

A tailored design in the "L'Or-Ray" series particularly suitable for offices, schools, institutions. Finished Satin Aluminum.

500 or 300 Watt

Cat. No. 155 Code "L'Orion"
Bowl: diam. 19 1/4", depth 3 1/8".
Susp. 36".

750 or 1000 Watt

Cat. No. 175 Code "L'Oriole"
Bowl: diam. 24 1/2", depth 4 3/4".
Susp. 42".



"L'ORACLE"



"L'ORION"

EYE-COMFORT LUMINAIRES ★

"Eclipse"

"Eclipse" luminaire is fashioned entirely from opaque Lunax Aluminum. Finished Polished Lunax.

200 Watt

Cat. No. 2200 Code "Eclipse, Jr."
Bowl: diam. 16", depth 4 1/4". Susp. 30"

500 or 300 Watt

Cat. No. 5500 Code "Eclipse"
Bowl: diam. 19 1/8", depth 5 1/2"
Susp. 36"

750 to 1500 Watt

Cat. No. 7500 Code "Orbit"
Bowl: diam. 24", depth 7 1/2". Susp. 42"

(Installation photos, pages 20, 21)

"Halo"

Opal glass and Lunax aluminum are blended in pleasing form . . . the slightly tapered polished metal cup is accented by horizontal lines.

200 Watt

Cat. No. 2205 Code "Halo, Jr."
Bowl: diam. 16", depth 4 5/8".
Susp. 30"

500 or 300 Watt

Cat. No. 5505 Code "Halo"
Bowl: diam. 17 3/4", depth 6".
Susp. 36"

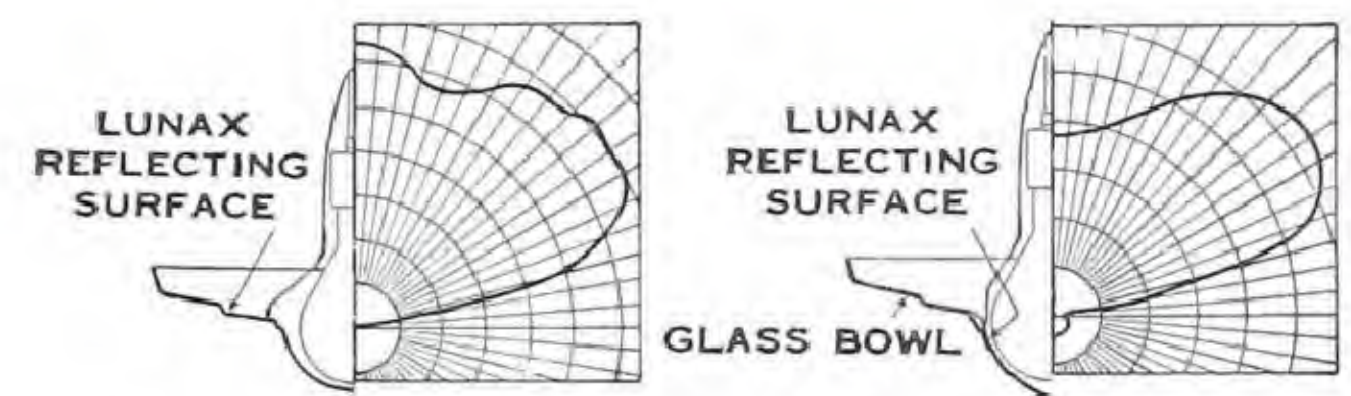
750 to 1500 Watt

Cat. No. 7505 Code "Planet"
Bowl: diam. 24 3/8", depth 8 1/8".
Susp. 42"

(Installation photograph page 20)

With Lunax Reflecting Surface

The superior quality of Lunax (Alzak) Aluminum lighting equipment is immediately apparent when compared to luminaires of ordinary quality aluminum and fabrication. Lighting of permanent efficiency is provided by every Curtis luminaire.



One-Half Cross Sections and One-Half Distribution Curves



"ECLIPSE"



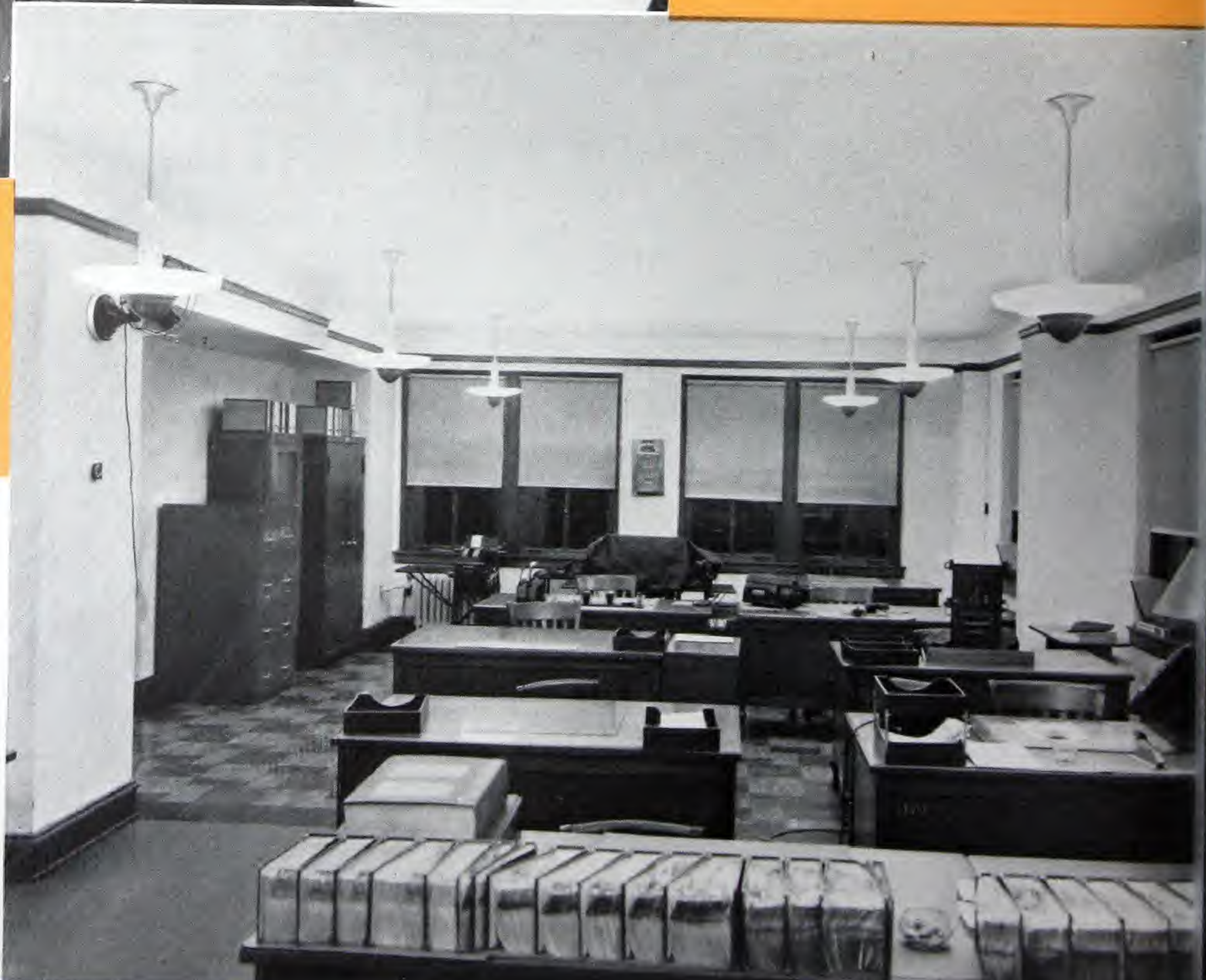
"HALO"

★ *A Drafting Room . . . An Office* ★



LEFT . . . In the drafting rooms of the Washington High School, Sioux Falls, South Dakota, "Eclipse" luminaires provide twenty-five foot-candles.

RIGHT . . . "Halo" luminous bowl units shown in the office of General Electric Company, St. Louis. Observe the adequate lighting on the desk tops.



★ A Restaurant...A Barber Shop ★

RIGHT . . . The Triangle Restaurant, Chicago, in which modern "Edge-Ray" luminaires provide even lighting which is especially comfortable for patrons.



LEFT . . . Indirect lighting in barber shops and beauty salons eliminates dazzling mirror reflections which annoy customers, and provides ideal light for working.



Decorative Color

"HALO"

FOR THOSE PEOPLE desirous of adding warmth or coolness to lighting effects with no impairment to the lighting performance . . . or for those interiors wherein color lends beauty and atmosphere, Curtis Lighting introduces these elements in decorative luminous color.

The opal glass bowl of the "Halo" design (shown below) may be procured in either Orange or "Empire Yellow".

The Orange is a golden, subdued orange color, which, when illuminated, imparts warmth and gayety to an interior. The "harvest moon" glow of this luminosity is very "easy on the eyes". Should one wish a paler decorative note, "Empire Yellow" is a friendly, live color.

Color as applied on these luminaires is permanent and true. The color is specially fired on the glass bowls—similar in process to porcelain enameling. A very small portion of light is diffused through the colored bowl while the Lunax reflector cup directs most of it upward for indirect lighting.

Data for the 500 or 300-watt size of "Halo" (the only size available in color) is given on page 19.

INDIRECT LIGHT

WHITE LIGHT

DIFFUSED
THROUGH
COLORED
BOWL



Adds New Interest ★ ★

"EDGE-RAY"

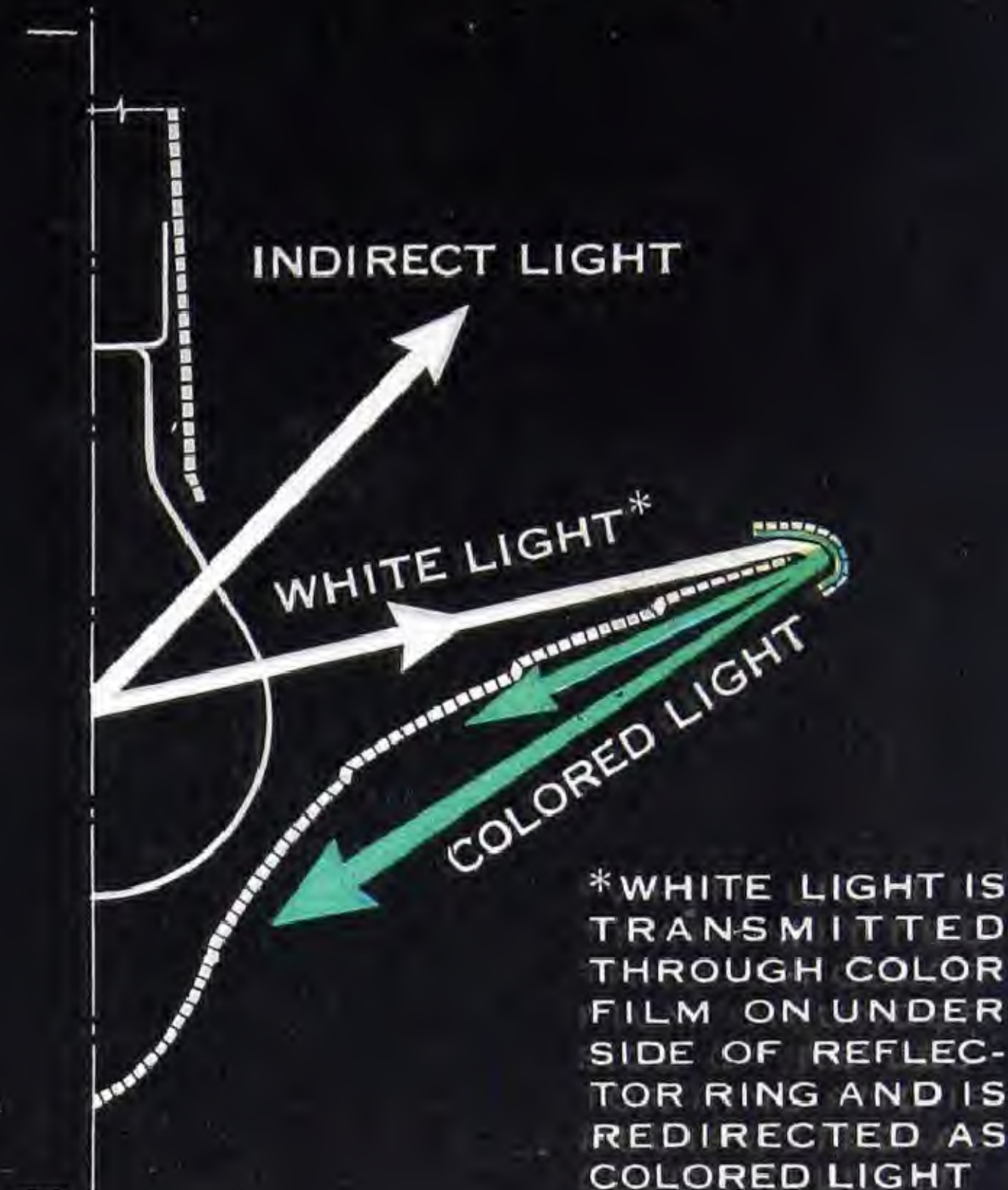
As **INGENIOUS** as is its designer, Walter Kantack, the "Edge-Ray" principle of self-illuminating the bowl exterior adapts itself perfectly to decorative color lighting. A glance at the diagram will reveal how Mazda light is redirected by a reflector ring through a translucent colored film applied on the underside of the ring.

The resultant colorful luminous sheen which bathes the silvery luminaire in no way conceals the interesting grained texture of the metal. Color on edge-rings is easily produced to harmonize with, or to match, interior decorative schemes. Should it be desirable to change the color it is a simple matter to relacquer the ring. New color adds new atmosphere. Standard colors available are green, amber, red, blue, yellow.

The indirect lighting from "Edge-Ray" remains permanently comfortable white light . . . the colored lighting being perfectly controlled by the reflector ring. No redirected light escapes to cause glare.

"Edge-Ray" Luminaires are manufactured under U. S. Patent 2,075,206

Data for "Edge-Ray" Luminaires is given on page 10



★ EYE-COMFORT LUMINAIRE

With Lunax Reflecting Surface

"Larra"

TWO horizontal circular rings of shimmering aluminum separated by a vertical metal band which reflects light on the body of the bowl . . . flashed opal glass disc surrounding a deep Lunax aluminum reflector cup . . . "Larra" is indeed an impressive luminaire design. It combines refined, artistic lines and indirect lighting efficiency. The

shallowness of the body of this unit suggests it particularly for low-ceilinged interiors of distinctive architectural design.

500 or 300 Watt

Cat. No. 5060

Code "Larra"

Bowl: diam. 20", depth 5½". Susp. 36"

750 to 1500 Watt

Cat. No. 5080

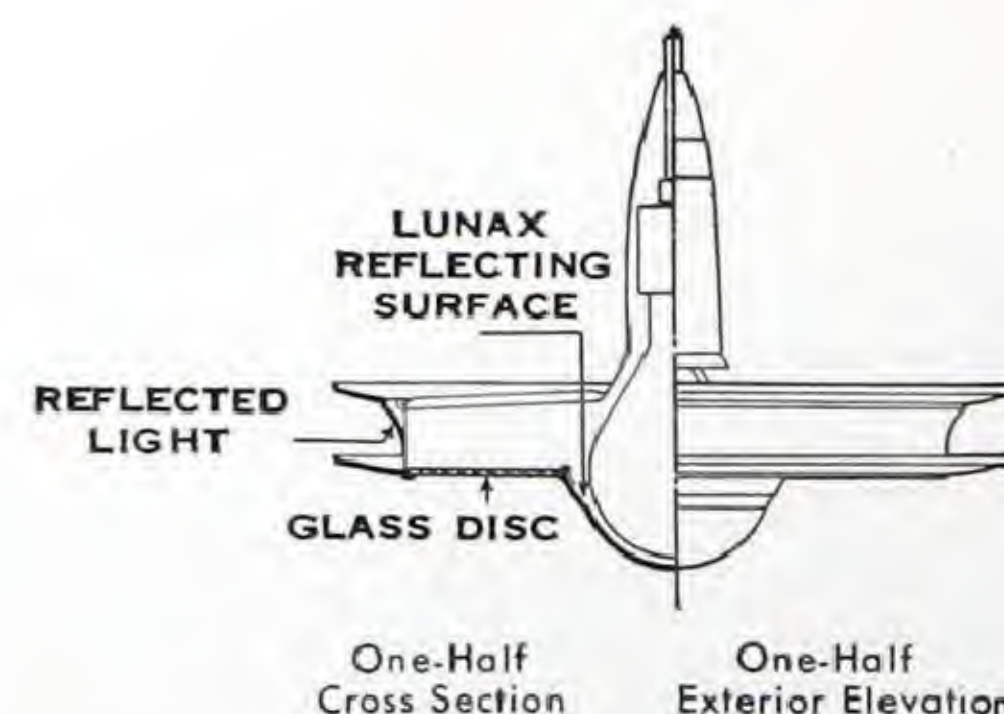
Code "Larmot"

Bowl: diam. 24", depth 7¼". Susp. 42"

(Installation photograph page 26)



"LARRA"



EYE-COMFORT LUMINAIRE ★

"Mark"

AVAILABILITY of the new Medium Bipost Base Mazda lamp makes possible a high wattage indirect lighting unit of minimum reflector proportions. Fairly small interiors with low ceilings, and those demanding high lighting levels, find this luminaire for the T-24 lamp distinctly advantageous. Curtis luminaires which will accommodate this new lamp are standard "Mark" design (shown here), and "Edge-Ray" and "Trump" style Luminaires which may be had with husk and socket assembly, specially built to house this new lamp.

For 1000-Watt Medium Bipost Base (T-24) Lamp

Made of Lunax, Finished Polished Lunax
Cat. No. 5100 Code "Mark"
Bowl: diam. $19\frac{1}{8}$ ", depth $5\frac{1}{2}$ ".

Susp. 36".

Cat. No. 1191 Code "Marbro"
(Similar to "Trump".)

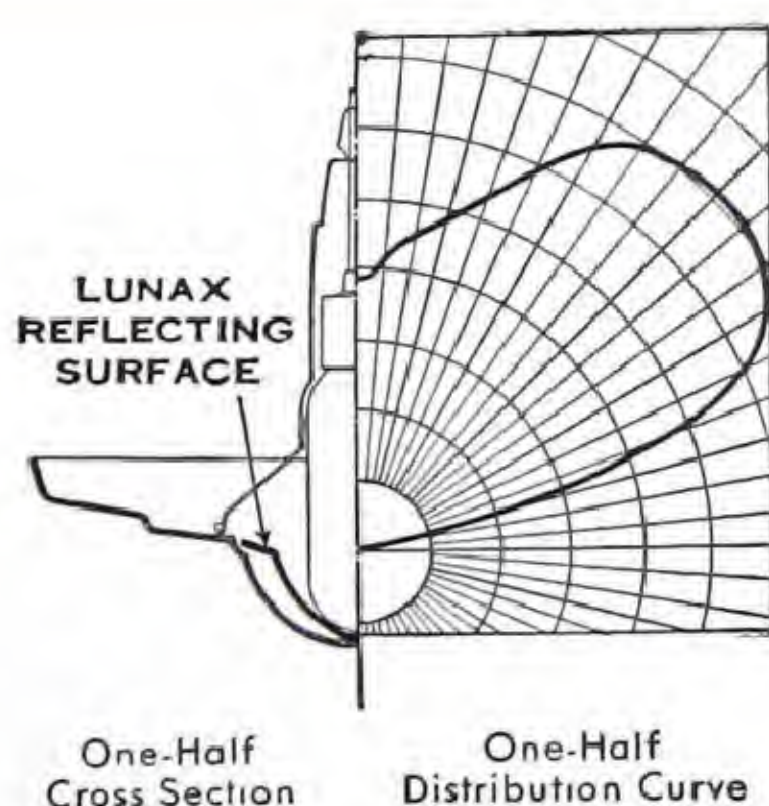
Cat. No. 1251 Code "Marduk"
(Similar to "Edge-Ray".)

(Installation photograph page 26)



*With Lunax
Reflecting Surface*

*For use with
Medium Bipost
Base Lamp*



"MARK"



Lighting Aids Selling and Business



The Indianapolis Power & Light Company has the showroom at the left, "Larra" luminaires made of opal glass and aluminum provide the smooth indirect lighting.

MERCHANDISING of electrical appliances is particularly successful from the showroom above. Indirect lighting makes the entire room valuable sales area. The quality of merchandise speaks for itself when it may be instantly seen.

CURTIS LUMINAIRES for use with the Medium Bipost Base lamp are seen in the office below. The wide spacing of existing outlets prompted the use of these high-wattage lamps in order to provide adequate intensity... it was unnecessary to invest in additional wiring.

"Mark" luminaires equipped with 1000-watt Medium Bipost Base Lamps provide 25 foot-candles of light in this office of the Budd Wheel Co., Detroit.



"Coronet"

Five horizontal bands accent the tailored design of "Coronet". Made of Lunax Aluminum, the interior surface has been especially processed to retain the high reflecting efficiency characteristic of Lunax (A/zak) Aluminum. The bowl exterior is finished Satin Aluminum with bright polished highlights.

500 or 300 Watts

Cat. No. 4400

Code "Coronet"

Bowl: diameter 19 1/4", depth 5 1/2".....Suspension 36".

"Diadem"

The conservative aluminum form of "Diadem" is relieved by a softly illuminated dome . . . a narrow space between the upturn of the main bowl and the upper edge of the lower bowl emits a small quantity of light which lends a pleasing illusion of transparency. "Diadem" is made of Lunax Aluminum, finished Satin Aluminum with polished highlights.

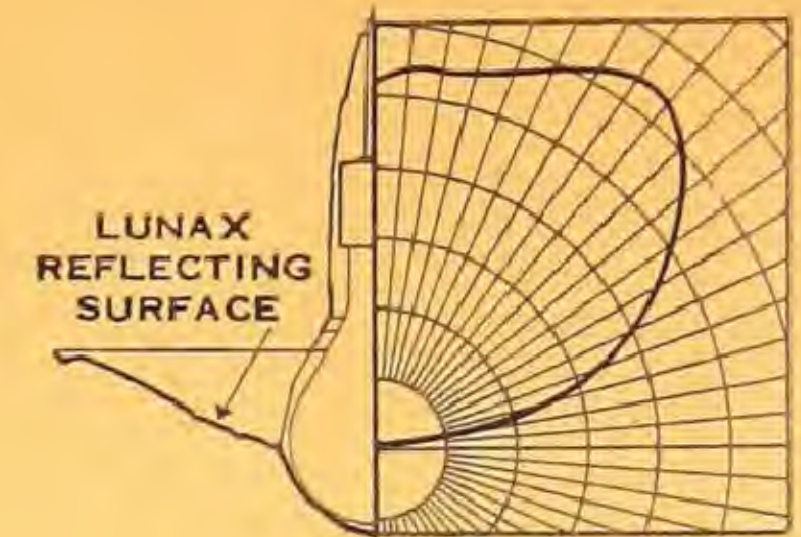
500 or 300 Watts

Cat. No. 4500

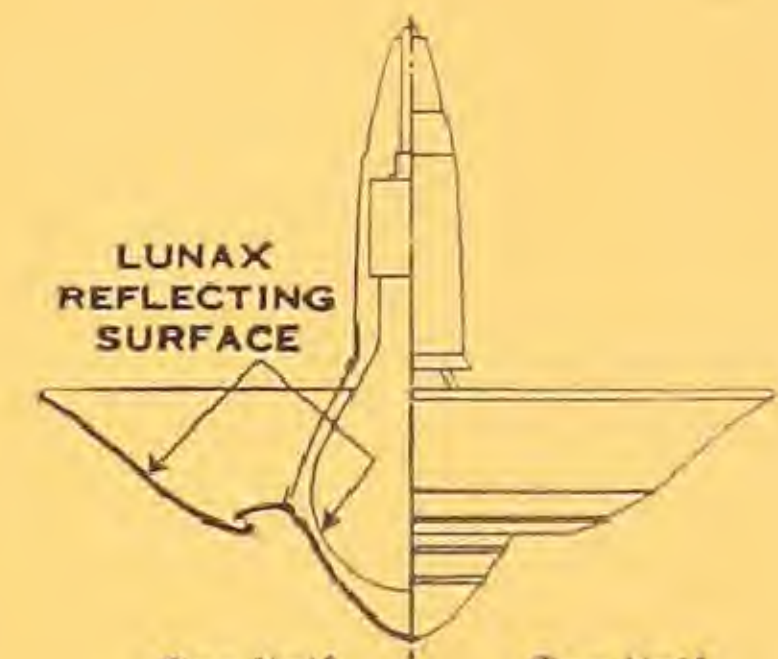
Code "Diadem"

Bowl: diameter 19 1/4", depth 6 1/2".....Suspension 36".

with "Lunax" Reflecting Surface



One-Half Cross Section One-Half Distribution Curve



One-Half Cross Section One-Half Exterior Elevation



"DIADEM"



"CORONET"



Mercury-Mazda Luminaires



"MERCOS"



"Merva"

These luminaires are made of Lunax and have canopy to house the transformer auxiliary for operating the High Intensity Mercury lamp . . . they are supplied with the transformers for operating on 110-120 volt A.C. Circuits. Reflecting surfaces are Lunax.

IN USING CURTIS LUMINAIRES for combination Mercury and Mazda lighting, it is important before purchasing lamps to ascertain the burning position of the High-Intensity Mercury lamp. Lamp positions are indicated.

"Mercos"

The "Edge-Ray" design has been adapted to Mercury-Mazda lighting. The flared canopy of Lunax aluminum is designed to conceal the top end of the 400-watt High-Intensity Mercury lamp which is burned in a **vertical** (base down) position.

For use with one 400-Watt High-Intensity Mercury Lamp and five 200-Watt Mazda Lamps . . . total 1400 watts.

Cat. No. 2170. Code "Mercos". Finished Lustrous Aluminum with polished highlights.
Bowl: diam. 27 $\frac{1}{2}$ ", depth 11". Susp. 48"

"Merva"

Within the bowl of "Merva" (similar in bowl design to "Trump") there are sockets which burn the Mazda lamps and the Mercury lamp **horizontally**.

For use with one 250-Watt High-Intensity Mercury Lamp and three 200-Watt Mazda Lamps . . . total 850 watts.

Cat. No. 2190. Code "Merva". Finished Satin Aluminum.
Bowl: diam. 17", depth 5 $\frac{3}{4}$ ". Susp. 36".



"Ferree-Rand" Luminaires



"HERCULES"



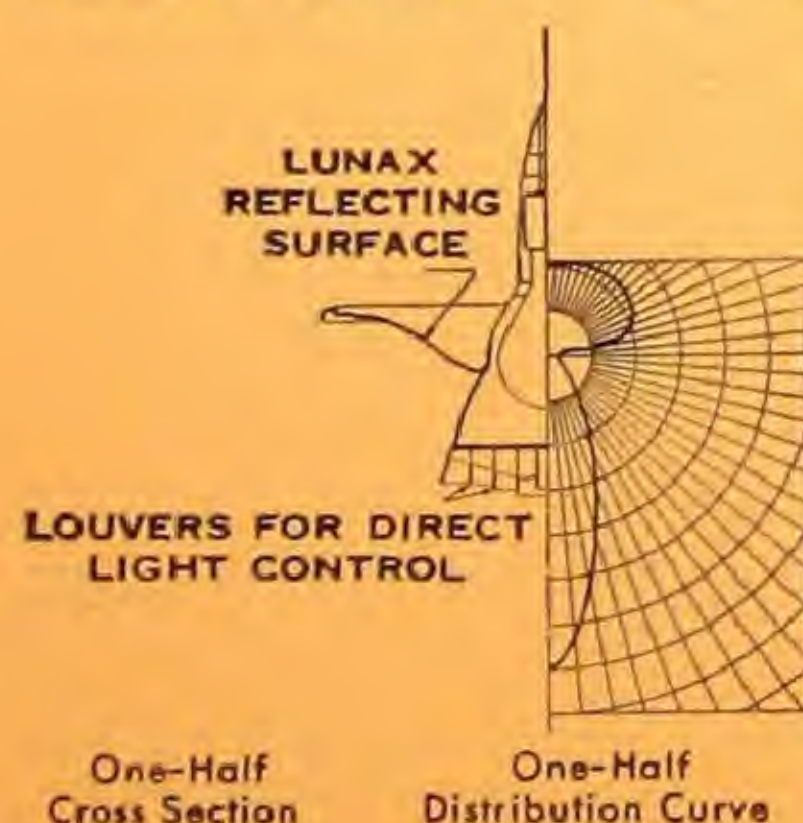
"EDGE-MONT"

Applications which require properly controlled indirect-direct lighting from ONE light source may be executed from Curtis "Ferree-Rand" luminaires incorporating the "Edge-Ray" principle (see page 10). Stores use this balanced lighting scheme to concentrate higher intensity light on the merchandise to inspire impulse selling . . . to add highlights to metallic and colorful objects.

"Hercules"

The amount and distribution of the direct light from "Hercules" can be varied to meet the requirements of the individual installation. Concentric ring louvers below a pebbled glass disc control the direct light, while the evenly diffused indirect component provides good general illumination.

Made of Lunax. Finished Lustrous Aluminum.



500 or 300 Watt
Cat. No. 1350 . . .
Code "Hercules".
Upper bowl diam. 21³/₈", lower bowl diam. 10¹/₄". Overall bowl depth 9".
Susp. 36". Louvers made of Steel painted mat gray.

"Edge-Mont"

Three concentric wedge-shaped louvers, staggered one below the other in the bottom of the bowl, control the very brilliant, very concentrated direct light from "Edge-Mont".

Made of Lunax Finished Lustrous Aluminum

750 to 1500 Watt

Cat. No. 1280

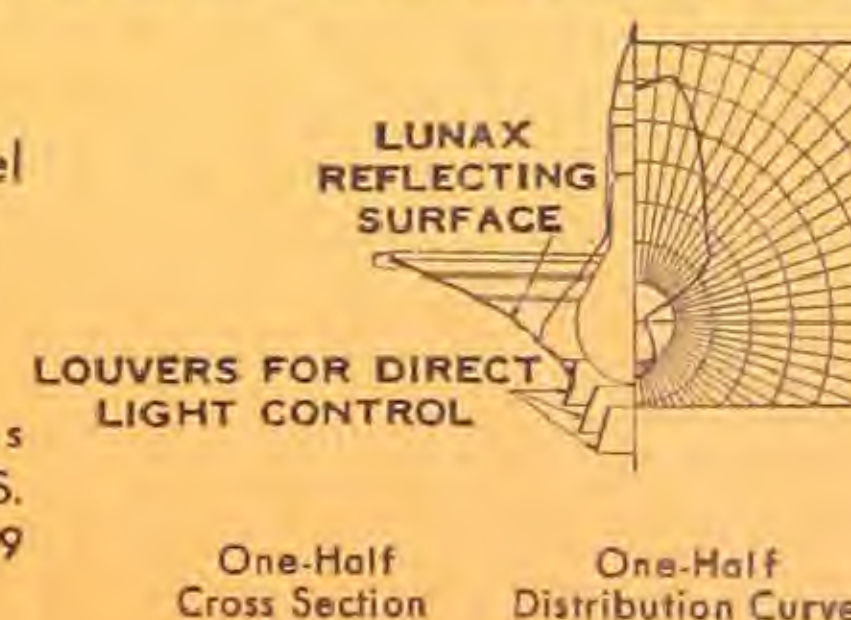
Code "Edge-Mont"

Bowl: diam. 27¹/₂". Overall bowl depth 10¹/₄".

Susp. 48".

Louvers made of Steel painted mat gray.

Ferree-Rand Luminaires manufactured under U.S. Patents Nos. 1,906,559 and 1,894,583.



★ Indirect...Direct Lighting ★



BEFORE

Rosenbaums, Inc., Pittsburgh, recently renovated their entire main floor. The new balanced lighting system augments the modernity of the furnishings. Study these "Before" and "After" views . . . they clearly show the betterment of seeing conditions which necessarily improve every phase of the merchandising.



AFTER

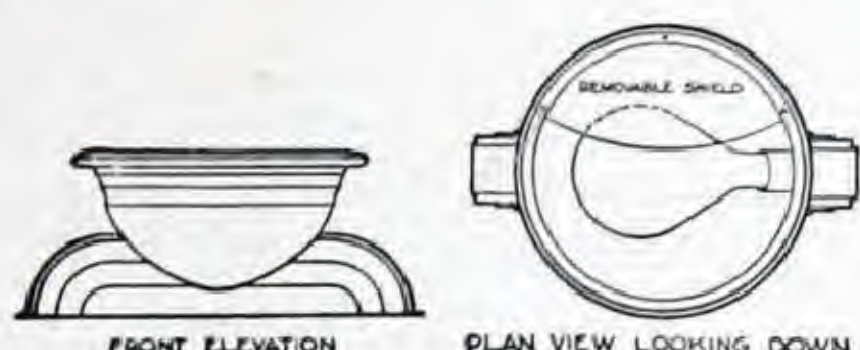
MODERN MERCHANDISING methods logically justify the use of indirect-direct lighting for certain purposes. Generally the conditions which demand this balanced lighting are highly competitive or highly specialized. The direct lighting component is a tangible stimulator of sales for types of goods which sell for quick turnover . . . or as impulse items . . . for merchandise whose sale depends on the glitter and brilliance of its design or material. Brilliant light adds life and sparkle to small colorful items . . . new appeal to familiar objects. The indirect lighting adds spaciousness and interest to the store as a whole.

Chain and variety stores favor this balanced lighting system. High intensity lighting on their merchandise stimulates quick selection and additional purchases. Small items and standard brands are easily identified. The characteristics of gems and metalwares carried in jewelry stores are enhanced, made more appealing, by direct lighting.

★ Portable Luminaire...Ceiling Luminaire ★

"Homer"

The pleasingly round bowl of "Homer" is made of Lunax Aluminum, finished Lustrous Aluminum . . . three horizontal lines in the polished nickel base echo the tri-fluted design of the bowl. A detachable shield is provided with "Homer" to reduce splash of light when these units are mounted near the wall. "Homer" may be connected to existing outlets . . . this means a saving in wiring and installation expenses.



500 or 300 Watt

Cat. No. 41 Code "Homer"
Bowl: diam. 14" Overall Ht. 7 $\frac{3}{4}$ "
Base: width 3 $\frac{3}{4}$ " length 18 $\frac{1}{4}$ "



"HOMER"

WALTER KANTACK is the designer of Curtis "Homer" luminaire—a portable lighting unit which initiates an effective mode of indirect lighting especially practical for those interiors unsuited to pendant installations. Portable luminaires may be conveniently mounted on wall case, high show, or display case tops in stores, show rooms, beauty shops, restaurants . . . on partition tops in offices and banks: or, inconspicuous shelves or brackets may be built to support "Homer" luminaires. When used as a source of general indirect lighting, or as a build-up for existing light intensity, "Homer" is a modern decorative accent for commercial interiors.

"Homer" design incorporates the "Edge-Ray" principle of exterior bowl illumination . . . white or colored light may be directed onto the bowl from the reflector ring encircling the top. Another satisfactory way to add a glow of color is to place "Homer" on a colored surface which tint is picked up by the illuminated bowl.



"IRIS"

"Iris"

In small or low-ceilinged store interiors, the problem of higher intensity lighting on the display counters is neatly solved by "Iris" luminaire.

This attractive unit is equipped with an X-Ray Reflector which provides efficient direct lighting . . . the crystal diffusing glass eliminating glare. A very small amount of light is used indirectly . . . softly illuminating the upper portion of the fixture and the surrounding ceiling area.

"Iris" is made of Aluminum and finished Satin Aluminum with polished highlights. Uses 200-watt lamp. Cat. No. 2000. Code "Iris". Diam. (bottom) 19" . . . height 14 $\frac{1}{2}$ ".



Lighting from Portable Luminaires



The small store at the right is an excellent example of those interiors which may be most effectively and conveniently lighted by portable indirect urns. Plain furnishings are literally brought up-to-date in appearance by these good-looking units. Mounted on the wall cases these seven "Homer" units are each equipped with one 500-watt lamp.



Partitions are made doubly useful and attractive by using them for indirect portable luminaires. When it is desirable to have modern lighting, without going to the trouble and expense of installing ceiling outlets, these luminaires are the solution.



EFFICIENT OR DECORATIVE LUMINAIRES



"MIRA"

"Mira"

Luminaires designated for indirect lighting in very low-ceilinged locations are necessarily restricted in lighting efficiency. "Mira" is admirably suited to this problem . . . the tiered stem, which supports the aluminum "Edge-Ray" bowl by three metal arms, spreads the reflected light. The bowl picks up the small bit of light redirected by the edge-ring and assumes illusory luminous concentric circles when viewed from below.

200 Watt

Cat. No. 1210

Code "Mira"

Finish: Upper portion, Mat Aluminum. Edge-Ray Bowl —Lustrous Aluminum with polished highlights.

Suspension (overall) 13 $\frac{1}{8}$ ". Edge-Ray Bowl: diam. 17". Diameter at ceiling 9 $\frac{7}{8}$ "

"Mona"

Dual use suggests "Mona" luminaire for decorative or supplementary lighting. This closely mounted unit may be used on the ceiling if the room is low—this allows maximum headroom with an indirect lighting unit. When mounted vertically and lighted, "Mona" becomes an attractive luminous rosette which serves as an accent for wall or column.

150 Watt

Cat. No. 1211

Code "Mona"

Maximum projection: 8 $\frac{3}{4}$ ". Diam. at ceiling 15". Bowl: diam. 7 $\frac{1}{4}$ ".

Finish: Upper part—Mat Gray Enamel
Lower bowl—Lustrous Aluminum

THERE ARE special lighting problems which are logically and effectively solved by these two new Curtis Lunax units, utilizing the "Edge-Ray" principle. These problems might be the illumination of . . . mezzanines, under-balconies, corridors, lobbies, foyers, ante-rooms, or other low-ceilinged interiors.



"MONA"

★ ★ Indirect Lighting from Wall Urns ★ ★

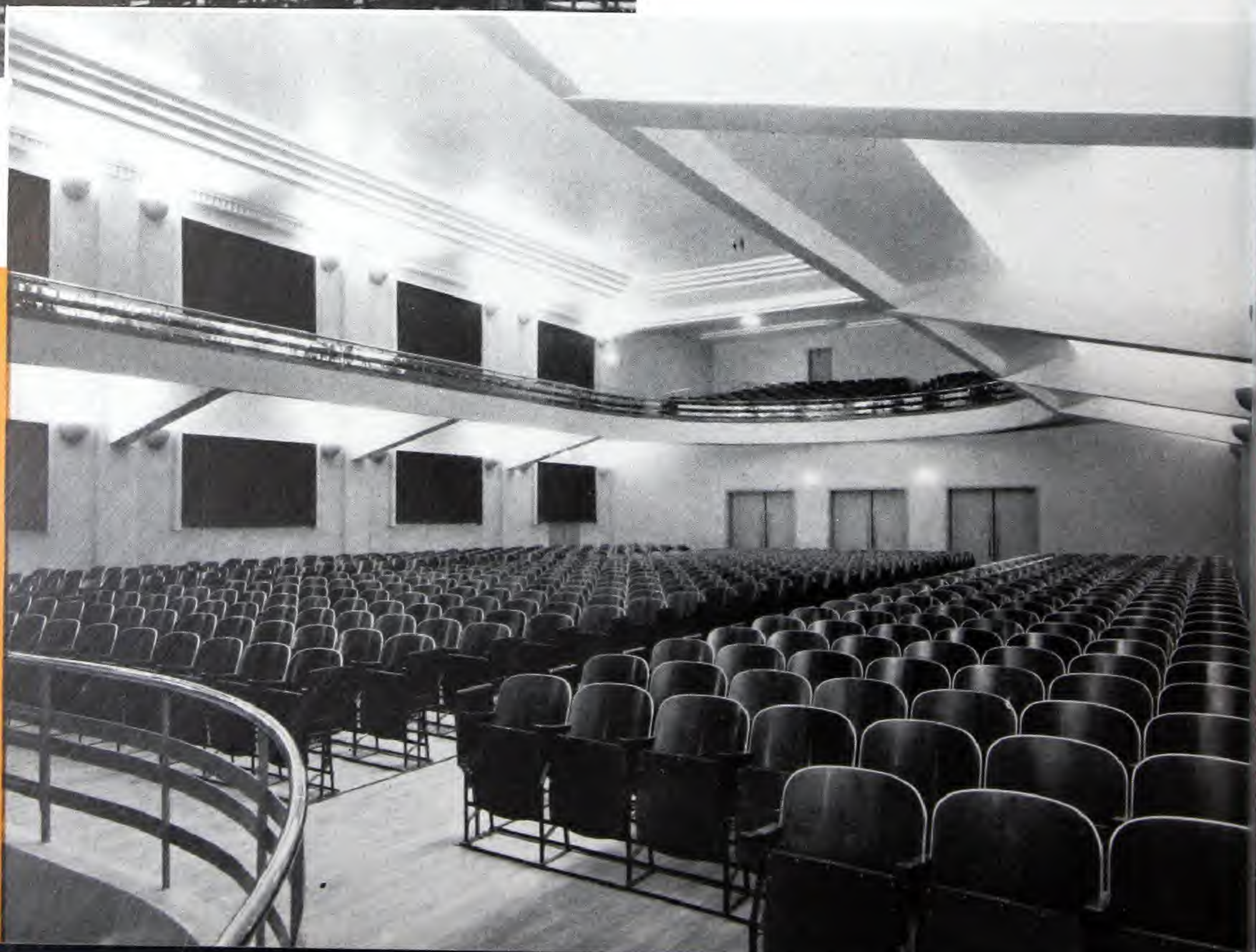


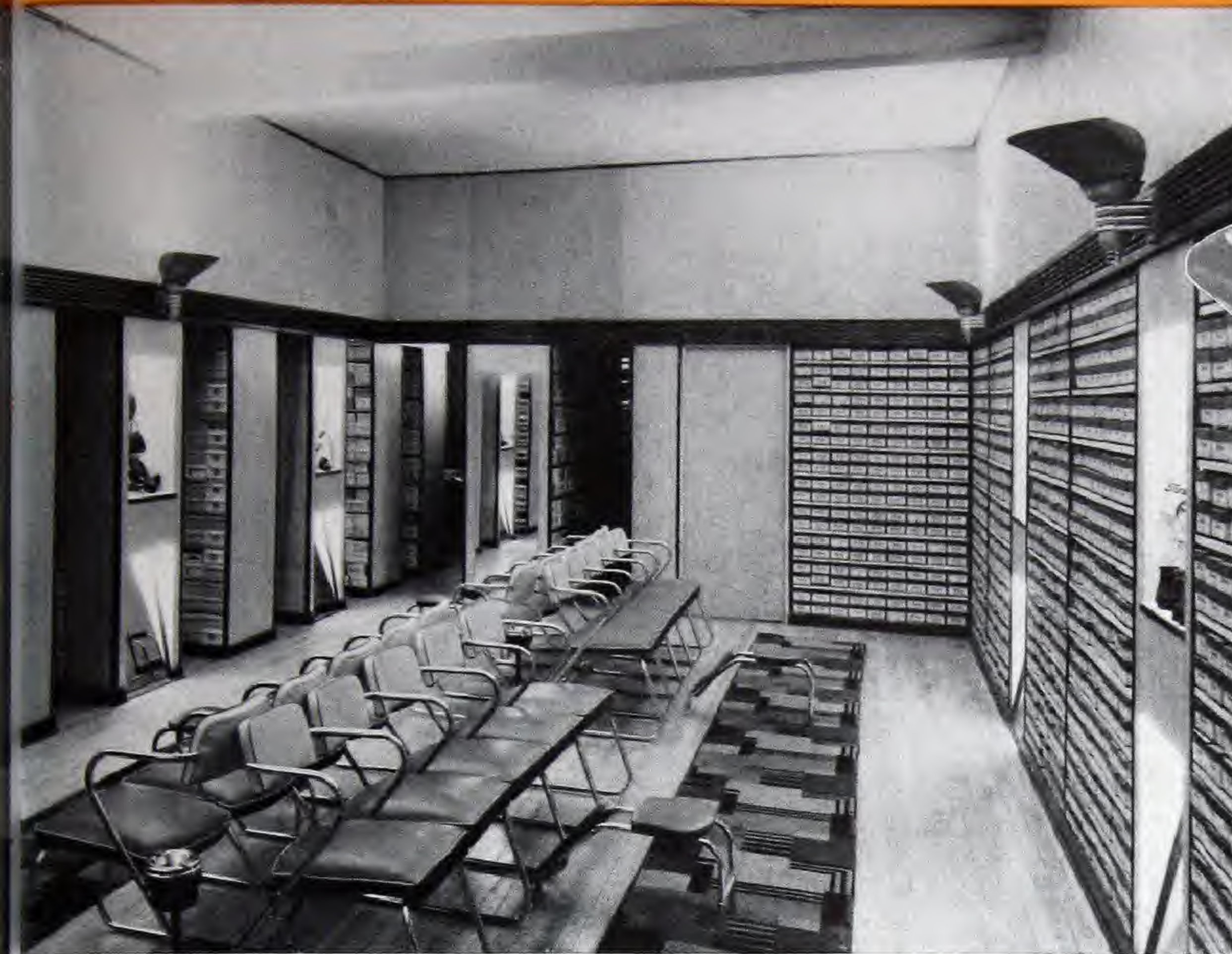
The two photographs shown here are dramatic examples of the wall urn mode of lighting. In each of these urns is concealed a powerful X-Ray Reflector.

LEFT . . . A modern church whose architectural beauty is emphasized by engineered lighting.

BELOW . . . Wall urns serve as source of general illumination above and below balcony in auditorium.

CURTIS LIGHTING
IN PARIS,
FRANCE





MODESTLY SIZED OFFICES, stores, restaurants—are briefly suggestive of those interiors which lend themselves to illumination from Curtis Appliques. Rooms with low ceilings may be flooded with generous indirect lighting from several of these mounted on existing wall outlets. This application involves little installation cost and provides a thoroughly modern lighting result. Curtis Appliques are designed to minimize wall splash.



"Urna"

500 or 300 Watt

Cat. No. 1548

Code "Urna"

Overall dimensions:
Height 14", Projection
13 1/2", Width 13".

An X-Ray Reflector (EC-69)—powerful, scientifically designed silver-mirrored glass reflector—is employed as an integral part of the design of "Urna". The body of "Urna", which is the X-Ray Reflector, is finished Bronzed Aluminum . . . support is finished Satin Aluminum with Polished Highlights. "Urna" bespeaks high quality in lighting efficiency and fabrication.



"VERA"

"Vera"

The tapering style of "Vera" Applique is graceful and conservative. Various sizes in this style are made of Steel and finished in either Satin Silvertone or Dark Bronze Enamel. Each is fitted with an X-Ray Reflector.

Cat. No.	Code Name	Wattage	Ht.	Width	Proj.	X-Ray Reflector
1533	Vera	150 or 100	10"	9"	8 7/8"	310-S
1534	Verna	200	13"	12 1/2"	12 1/4"	410-S
1535	Verbena	200	13"	12 1/2"	12 1/4"	EC-68
1536	Verbus	2-200	13"	24"	12 1/4"	EC-68
1537	Virgil	500 or 300	13"	13"	12 1/2"	510-S
1538	Virgene	750 or 1000	17"	16 1/4"	16 1/4"	910-S

★ Beneficial Results from Proper Lighting ★

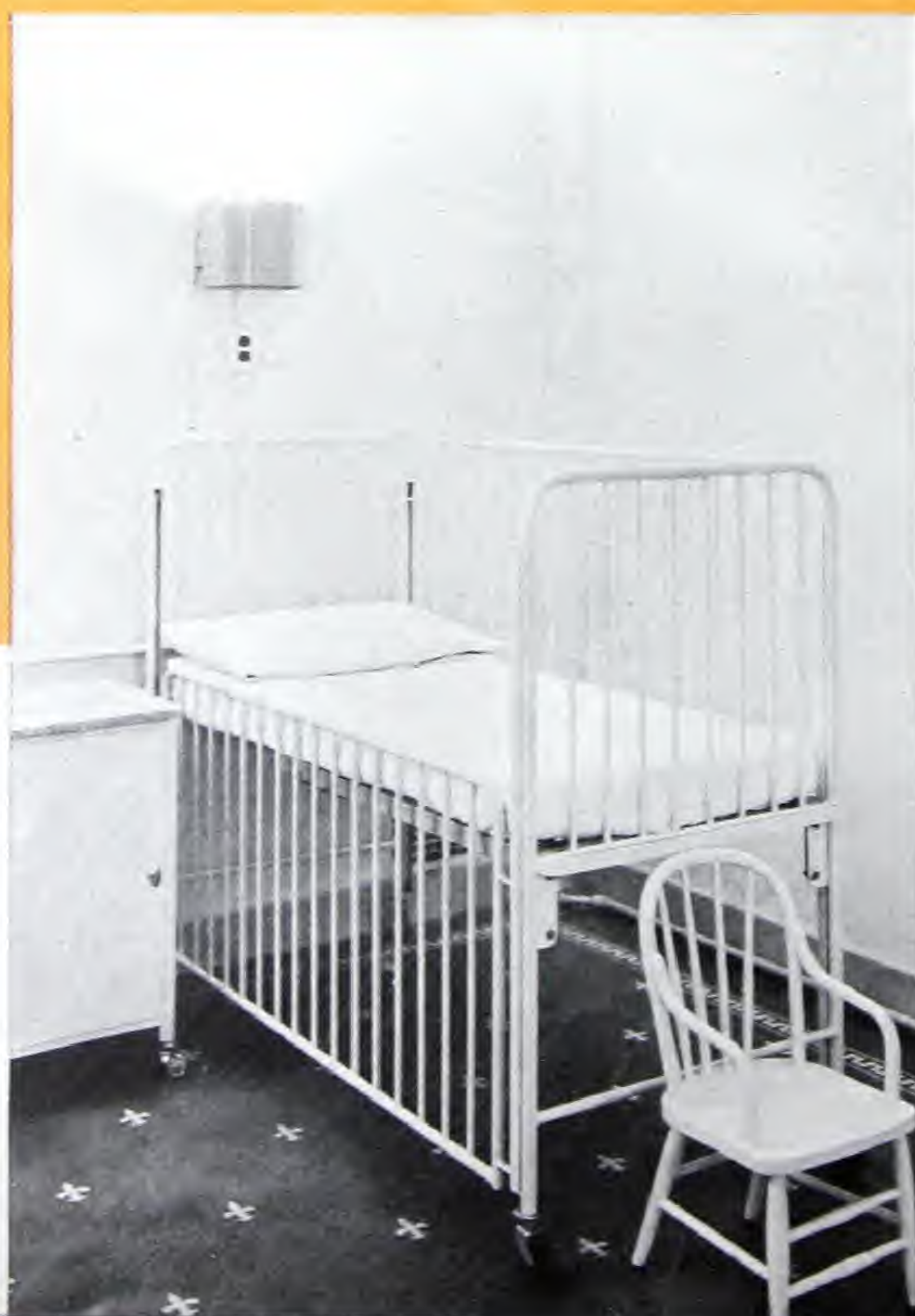


Beneficial qualities of Curtis eye-comfort lighting are enthusiastically appreciated in institutions for the sick and handicapped wherein restful indirect lighting must be frequently supplemented by high-intensity direct lighting for individual medical examinations.

ABOVE: Children's Ward, Frankford Hospital, Philadelphia. General view depicts the combination direct-indirect lighting.

RIGHT (first) Indirect lighting from "Duo-Light".

RIGHT (second): Direct lighting from "Duo-light".



★ "DUA-LIGHT" AND "GLO-RAY" ★

"Dua-Light"

Two views of "Dua-Light" at the right clearly explain the position of the X-Ray Reflectors which control the direct and indirect lighting. One pull switch (included) controls the direct lighting at the unit . . . another—to control indirect lighting—may be added in lieu of wall switch. "Dua-Light" is generally mounted in hospitals 78" above floor . . . in other interiors 66".

**150 Watt (Indirect)
and 25 or 50 Watt (Direct)**

Cat. No. 42

Code "Dua-Light"

Finish: Zinc-plated ready to paint color of wall
Height 8 $\frac{3}{4}$ ", Width 10 $\frac{3}{4}$ ", Projects 5 $\frac{3}{4}$ "

Besides being used in Hospitals, "Dua-Light" may be satisfactorily used for small offices, reception rooms, homes. Reduces wiring and maintenance expenses.

"Glo-Ray"

To insure safety of passage in hospitals at night, Curtis has designed "Glo-Ray" night-light. "Glo-Ray" lighting enables nurses to enter patients' rooms without disturbance. May be conveniently used in corridors, stairways and landings, in public buildings. "Glo-Ray" has 3-piece construction for easy installation. Feed wires can be inserted at top, bottom, or on left or right side. Shutter on back of small square cover hides the lamp from view.

15 or 25 Watt

Cat. No. 72

Code "Glo-Ray"

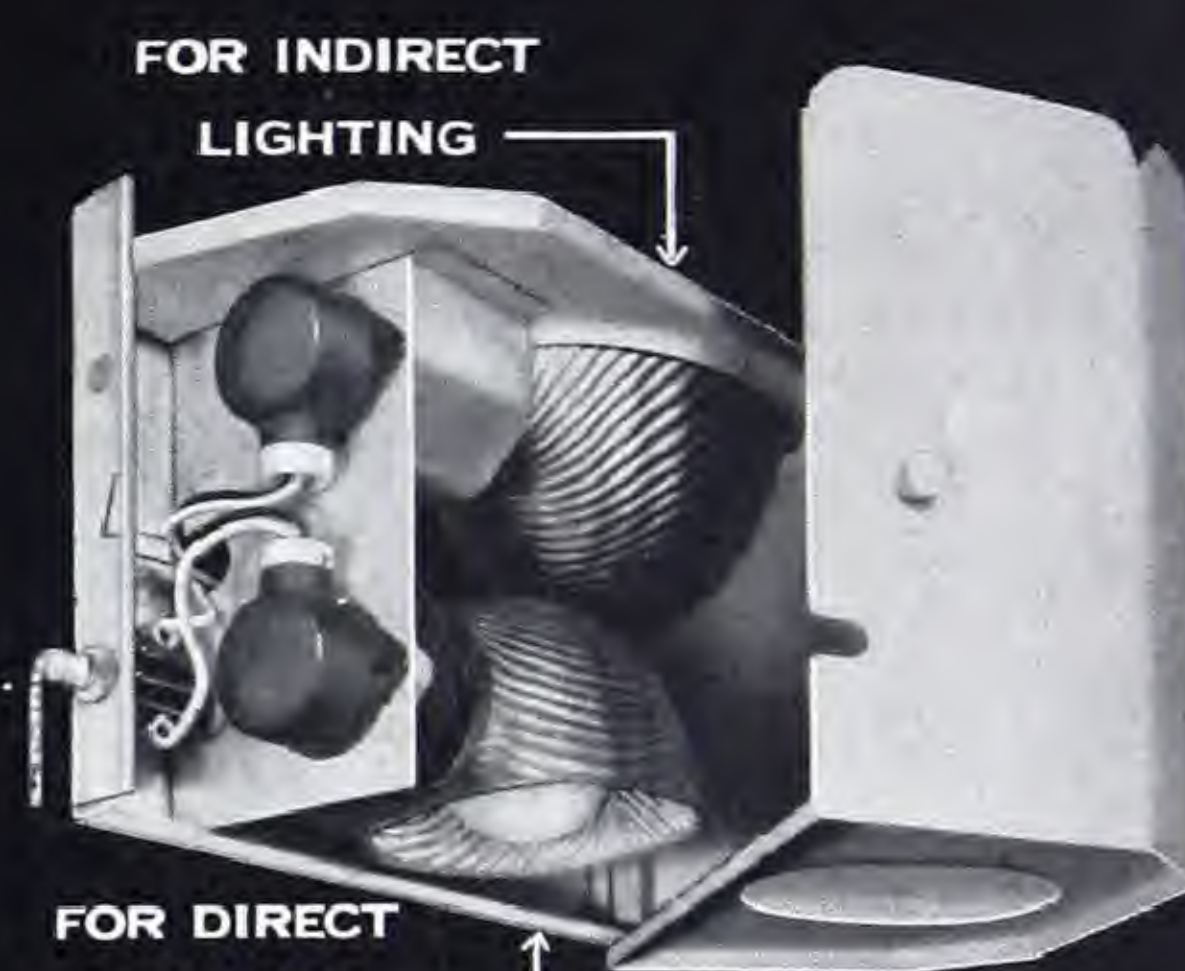
Finish: Box, Black Enamel; Cover, Zinc-plated ready for painting.

Box: 3" x 4" x 6"; Cover 5" x 6 $\frac{3}{4}$ "

Install 18" above floor



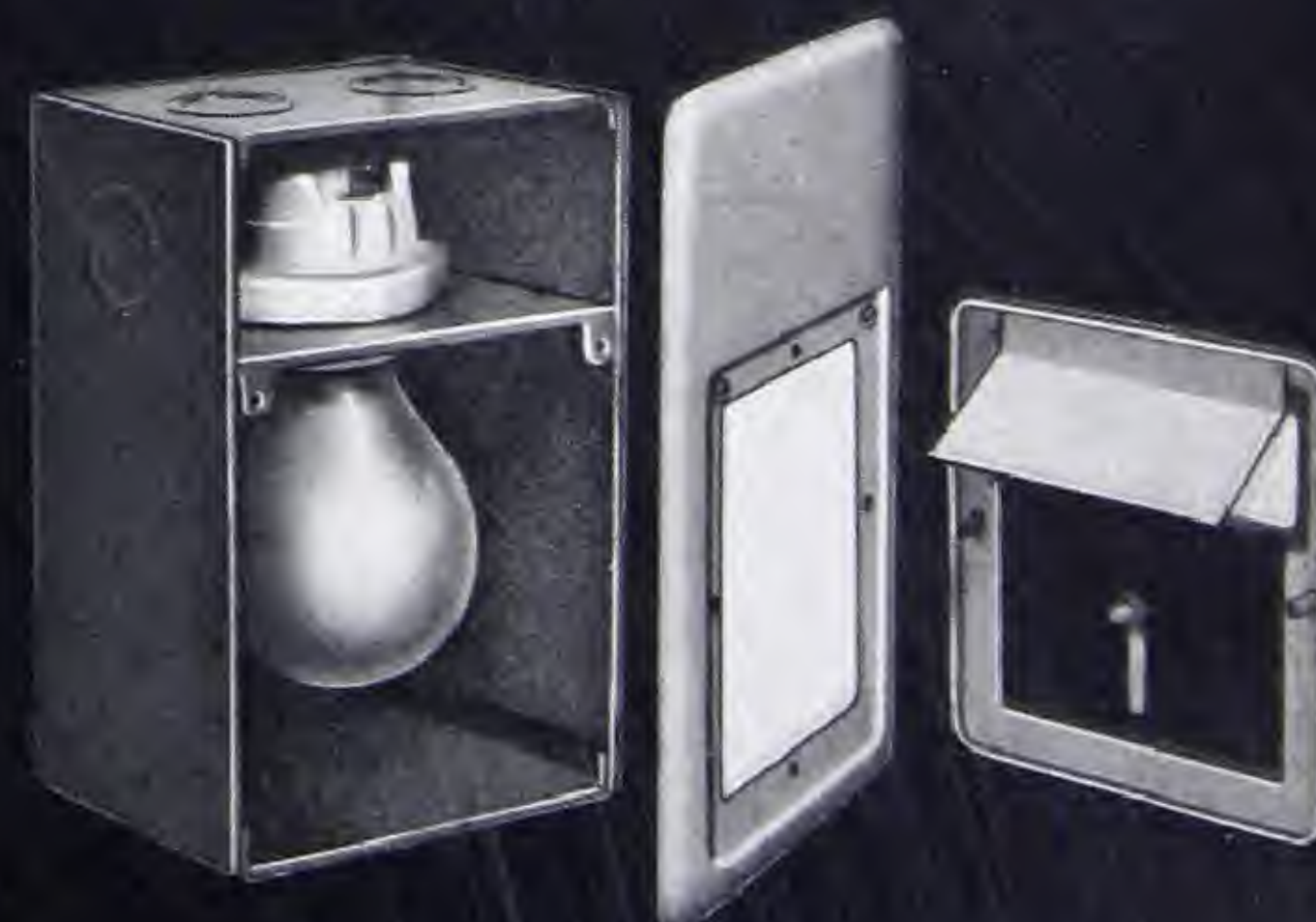
"DUA-LIGHT"



DUA-LIGHT—SHOWING POSITION OF X-RAY REFLECTORS



"GLO-RAY"



GLO-RAY—SHOWING THREE PIECE CONSTRUCTION





Every Mode of Architectural Illumination



BRIEFLY the following pages suggest the wide range of lighting equipment designed and manufactured by Curtis Lighting. For detailed information on these products you are invited to consult Curtis Engineers or write for literature.



COVE LIGHTING

X-Ray Reflectors are designed for every cove lighting application. This type of lighting is intimately related to the architecture of the interior and it is essential to plan and specify lighting needs **BEFORE** building or interior is past the "foundation" stages. Each job presents a different problem and engineering specifications should be made by experienced men.

For Panel Lighting, Skylight Lighting, Built-in Lighting, etc., X-Ray Reflectors and other Curtis equipment provide the ideal economical solution. Consultation is invited.

1. **RIGHT** . . . reverse cove lighting in reception room of WGN Radio Station, Chicago.
2. **LEFT** . . . cove lighting . . . position of X-Ray Reflectors indicated in diagram.
3. **BELOW** . . . St. Mary's industrial School Chapel, Baltimore . . . effective column cornice lighting.



Effectively Achieved with Curtis Equipment ★



RECESSED LIGHTING

Direct lighting from properly designed recessed units is admirably suited to certain interiors . . . public spaces in large buildings, jewelry stores, gymnasiums, exhibition halls, low-ceilinged interiors . . . wherever a clear ceiling is necessary and

where high-intensity lighting is desirable.

X-Ray Reflectors and recessing equipment make Curtis products adaptable to all types of recessed lighting. In addition to the recessing treatments shown at the right, specially designed rings, ornamental louvers etc. are created by Curtis Engineers. Write for information . . . and consult Curtis Representatives and Engineers **before** wiring and installation plans are completed.



RECESSED X-RAY REFLECTOR



GLASS ROUNDEL



CONCENTRIC RING LOUVER



ORNAMENTAL LOUVER



LEFT . . . recessed lighting as it may be applied to lobbies, reception rooms and foyers.

RIGHT . . . Neiman-Marcus Store, Dallas, Texas . . . pleasing combination of panel and recessed lighting.

BELOW . . . An exhibition hall conveniently illuminated by X-Ray recessed lighting.





X-Ray Show Window Lighting



THE TREND TOWARD VERY HIGH INTENSITY SHOW WINDOW LIGHTING IS WELL EXEMPLIFIED BY THE SHOW WINDOWS OF ORECK'S, MINNEAPOLIS. AT THE LEFT—A VIEW OF SEMI-DISTRIBUTING X-RAY REFLECTORS MOUNTED IN THREE ROWS WITH CONCENTRATING REFLECTORS INCREASING THE REAR-WINDOW INTENSITY. BELOW—FRONT-VIEW OF ORECK'S.



SIZABLE

investments made by merchants in store frontages are concrete evidence of the large returns expected from show window merchandising. X-Ray show window lighting insures the greatest possible selling from window displays . . . the most effective dramatization of all the merchandise.



**X-Ray
Reflectors**

ATTRACTION-ZONE lighting is the accepted advanced idea in show window lighting. X-Ray reflectors are designed to concentrate the most light on the most important window display area—the lower third, or "Attraction-Zone". This plus lighting adds stopping power to the display by arresting eye interest at first glance. Every size and type of show window may be made more valuable as a selling agent by "Attraction-Zone" Lighting.

COLOR LIGHTING in the show window is effectively achieved with Curtis interior floodlights equipped with color filters.

Handbook 25 fully describes equipment for and methods of X-Ray Show window lighting . . . write for this book and consult Curtis Engineers for efficient planning.

CURTISTRIP . . . LIGHTSTRIP

The simplified wiring channel and raceway—CurtiStrip—provides the ideal mounting for continuous rows of X-Ray Reflectors . . . in show window, cove lighting, etc.



Equipped with tubular or lumiline lamps CurtiStrip becomes a linear lighting source—"Light Strip"—for decorative or general illumination.

★ Floodlighting...Direct General Lighting ★

FLOODLIGHTING



Dramatic architectural beauty and potent advertising gains may be achieved through floodlighting with Curtis projectors. These exactly designed, sturdily made units embody every advanced principle in projector design, high-grade materials, expert fabrication. Color lenses available. Curtis Floodlighting equipment falls into two groups:

X-Ray Projectors for heavy-duty floodlighting or permanently brilliant floodlighting of historic and public buildings, monuments, etc. These units are fitted with powerful X-Ray Reflectors.

Lunax Floodlights are inexpensive quality floodlights for permanent or temporary applications. Their brightly polished Lunax (Alzak) reflecting surface insures able lighting performance. Write for Handbook 777 for floodlighting information.

Competent engineering is essential in planning successful floodlighting. Curtis Lighting invites consultation from the prospective users of exterior or interior floodlighting.



DIRECT GENERAL LIGHTING

For those buildings designated for activities where direct general lighting is necessary, Curtis has a complete and efficient group of X-Ray Reflectors for high-bay or low-bay mounting. These provide adequate, even lighting at the seeing level.

These X-Ray Reflectors are used in industrial plants, gymnasiums, armories, assembly halls and exhibition halls. The variety in light control possible with the group of X-Ray Reflectors for Mazda or Mercury lighting makes every installation of this type practical and effective.

Handbook No. 25 fully describes and illustrates X-Ray Reflectors for high-bay and low-bay mounting. Write for a copy, or request complete information from the Curtis Engineering Department.





Ecclesiastical Illumination



LEFT
CHURCH
LANTERN

BELOW
CHURCH
BRACKET



CHURCH INDIRECT LUMINAIRE

THE PROPER lighting of churches is in itself a distinguished art. Luminaires and illumination especially designed to produce an atmosphere of comfort, restfulness, and meditation, reveal the fine craftsmanship and artistry of the Curtis designers.

These ecclesiastical lighting units and modes of lighting are characteristically suited to the many and various styles of church architecture existing in America . . . reflecting in form and detail the spirit of the edifice.

At the right are shown three church luminaires, products of Curtis Luminaire Studio. These are merely suggestive of the leadership in the creation of dignified, handsome church illuminators which Curtis Lighting enjoys. Church managements and architects are invited to consult the Curtis Luminaire Studio.

Injurious is an adjective accurately describing the lighting as it formerly existed in the church shown below—the "Before" photograph. Many glary light sources shielded only by glass globes scattered dazzling, spotty light which imparted a restless, disturbing atmosphere. Worshipers seated in the rear balcony could not see the altar, or services. By installing Curtis indirect lighting the church becomes a rejuvenated, spiritual interior. Light sources are hidden from all lines of vision . . . a smooth, comfortable atmosphere prevails. The "After" photograph reveals the vast improvement brought about by relighting.

BEFORE



AFTER





Reflecting Surfaces and Their Maintenance



THE REFLECTING SURFACE is the cardinal factor in determining the efficiency of an indirect luminaire. Curtis indirect lighting units are manufactured with, or for, one of three reflecting surfaces; namely, **X-Ray** silver mirrored glass, **Lunax** (Alzak) Aluminum, or the **Silvered Bowl Lamp**. Each of these is highest quality of its type. Because of scientific thoroughness involved in the design of Curtis luminaires every unit renders maximum lighting efficiency. The three types of reflecting surface are briefly discussed.

X-RAY REFLECTORS were originated in 1897 by Curtis Lighting. Contours and applications for these powerful reflectors have changed, but the fundamental reflecting efficiency, which made the first X-Ray Reflectors standard in better lighting practice, has been consistently maintained in the newer styles for indirect lighting.

X-RAY Reflectors are made of special grade, thin, tough, clear, crystal glass . . . mirrored with **pure silver** which has the highest rated efficiency of any material used in the manufacture of reflectors. The silver is completely preserved by the glass on inside and the "Golden Armor" protective coating on the outside. The "Golden Armor" coating results from a scientific process perfected by Curtis Lighting Research Laboratories and insures the silver's permanent brilliance . . . keeps it from peeling and cracking.

MAINTENANCE of X-Ray Reflectors involves a minimum amount of effort . . . they need not be removed from the luminaire. By simply wiping them with a damp cloth, dust and smoky film are quickly removed and the original efficiency of the reflector is immediately restored. Illustration at top left shows typical manner in which X-Ray Reflectors are fitted into eye-comfort luminaires.

• • •

LUNAX is the name applied to Curtis Lighting Aluminum products with surfaces processed under the "Alzak" patents. This process, briefly, consists of brightening the surface of high purity Alzak aluminum lighting equipment by electrolytic means and then preserving this brightened surface by an aluminum oxide (Al_2O_3) coating. (Note diagram.) This clear, colorless, non-porous, protective film is hard and glass-like. The reflection factor is higher than for any other metal except silver.

Lunax is made with specular (highly polished) surface suitable for use where a high degree of light control is required, or etched (mat) surface suitable for use where lighting is to be of a diffused character. Write for Serial No. 854 which explains more fully this interesting metal.

MAINTENANCE of Lunax (Alzak) reflecting surface is easily achieved by wiping frequently with a dust cloth; for more thorough cleaning use a mild cleansing powder like Bon Ami.

• • •

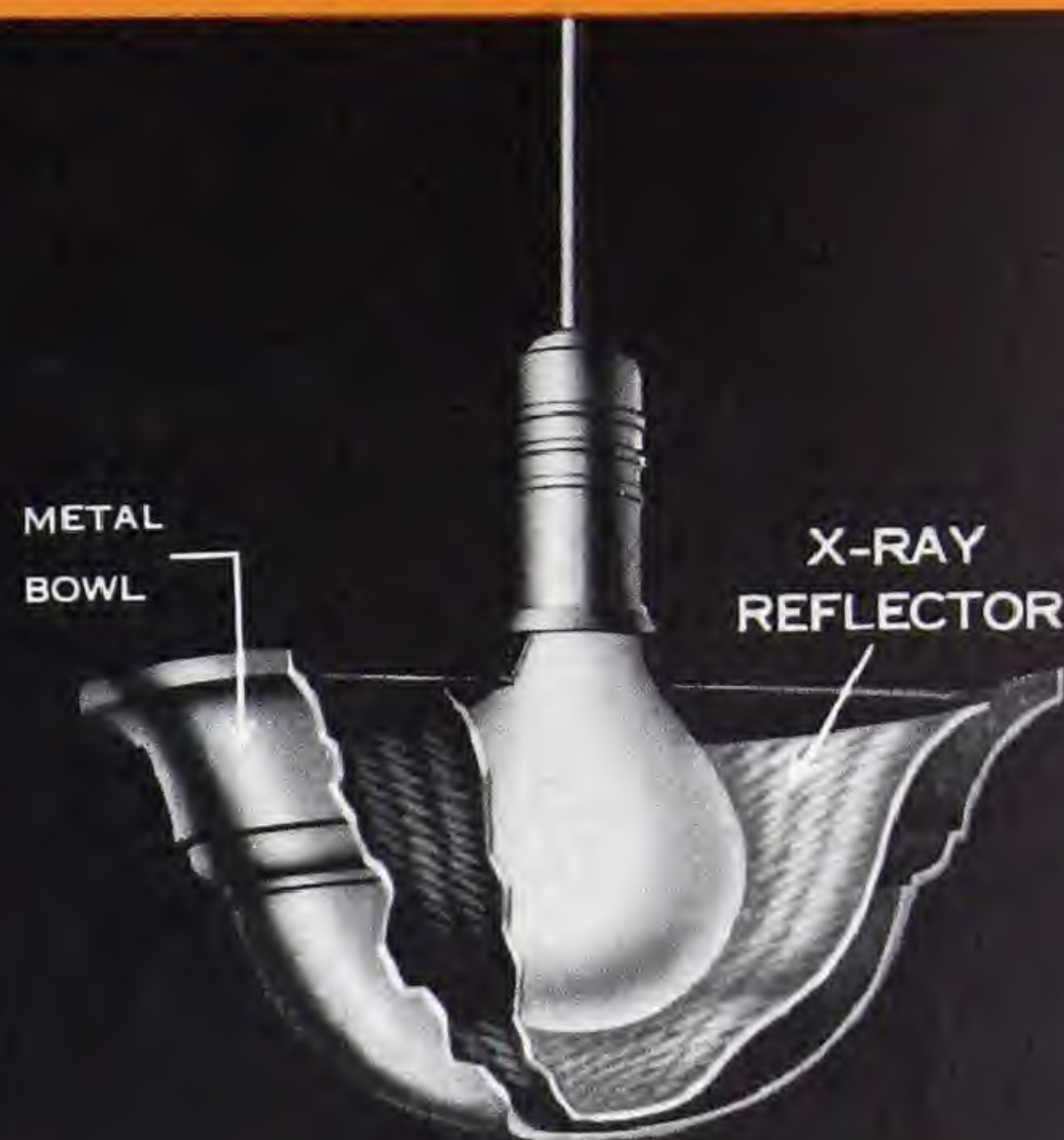
SILVERED BOWL LAMP. Mazda lamps to which has been applied a silver reflecting surface are known as Silvered Bowl Lamps (see illustration). The finish is durable and converts the lamp into a self-contained indirect light source. Luminaires designed for use with this lamp may be conveniently relamped through the opening in the bottom of the luminaire.

MAINTENANCE . . . lowering of the reflecting efficiency is caused only by natural deterioration of the lamp. Replacing the lamp restores original efficiency. The inside of luminaire bowl should be kept free from dust.

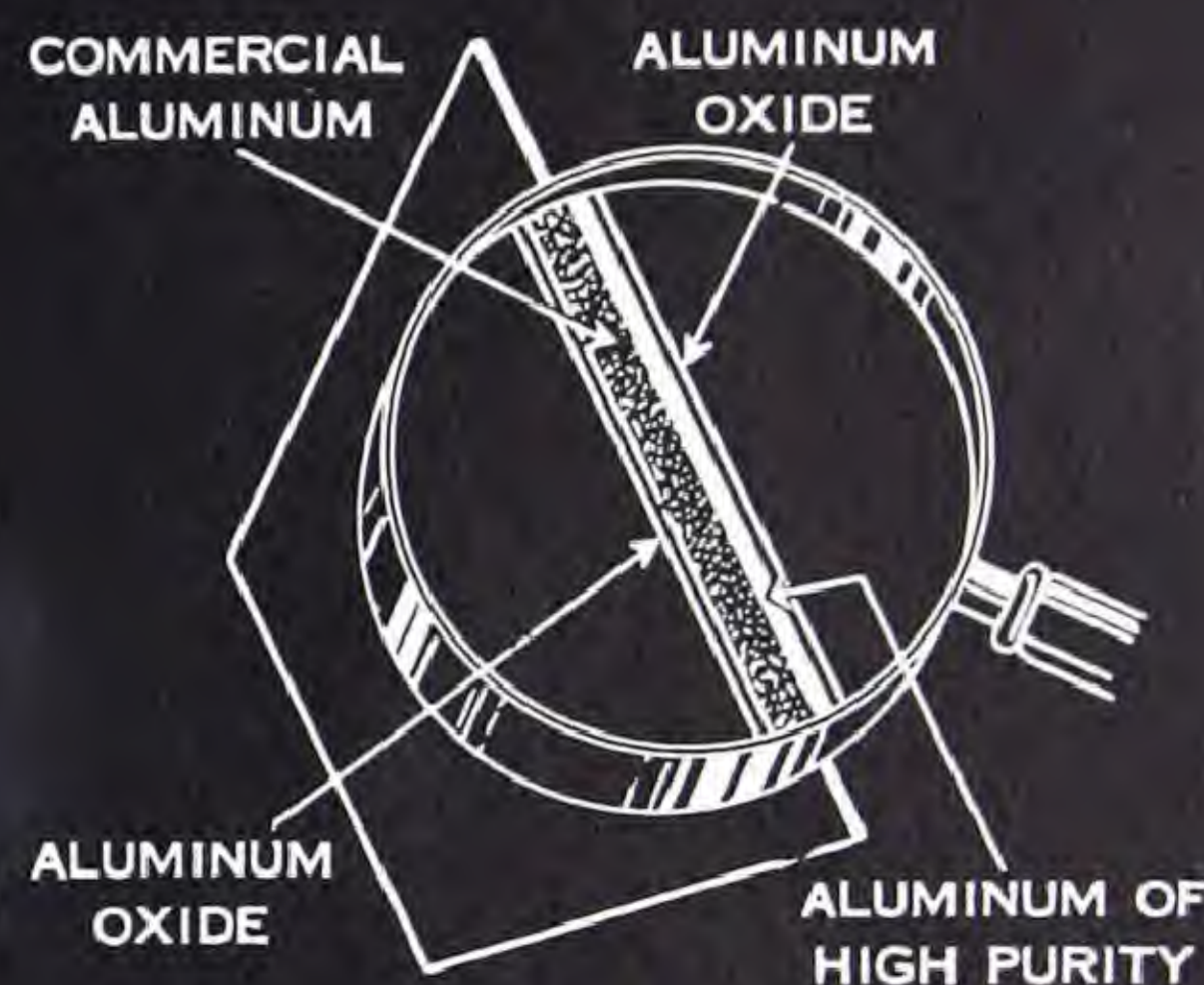
• • •

Below is given a table of reflection factors which represent averages for many tests made by various authorities and indicates what may be generally expected from laboratory samples of the different types of reflecting media. They are given here for the purpose of showing the relative reflection values. Commercial reflectors will vary somewhat from these figures.

Material	Reflection Factor	Material	Reflection Factor
Curtis X-Ray Silver Mirror	93%	Chromium	64%
Lunax (Alzak) Aluminum Polished	85%	Nickel Plated Metal	63%
Lunax (Alzak) Aluminum Etched	80%	Cadmium	62%
Porcelain Enamel	70%	Stainless Steel	53%
Rhodium	69%	Monel Metal	52%



**SILVER MIRRORED GLASS
X-RAY REFLECTOR**



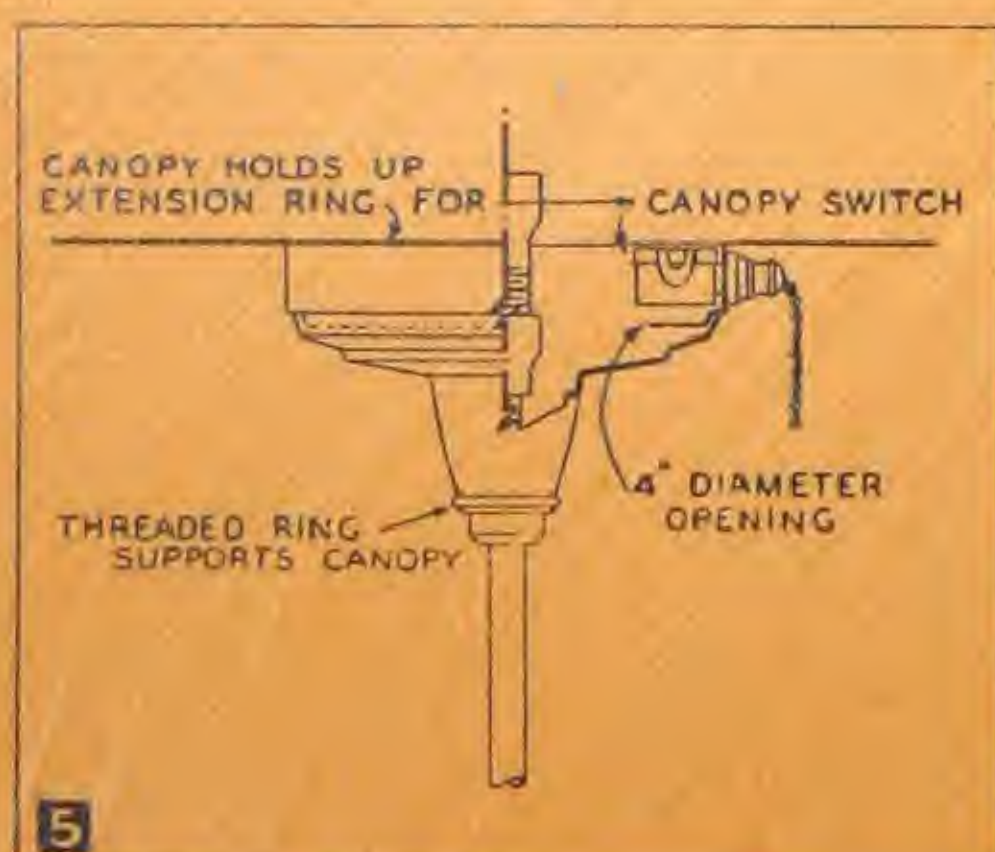
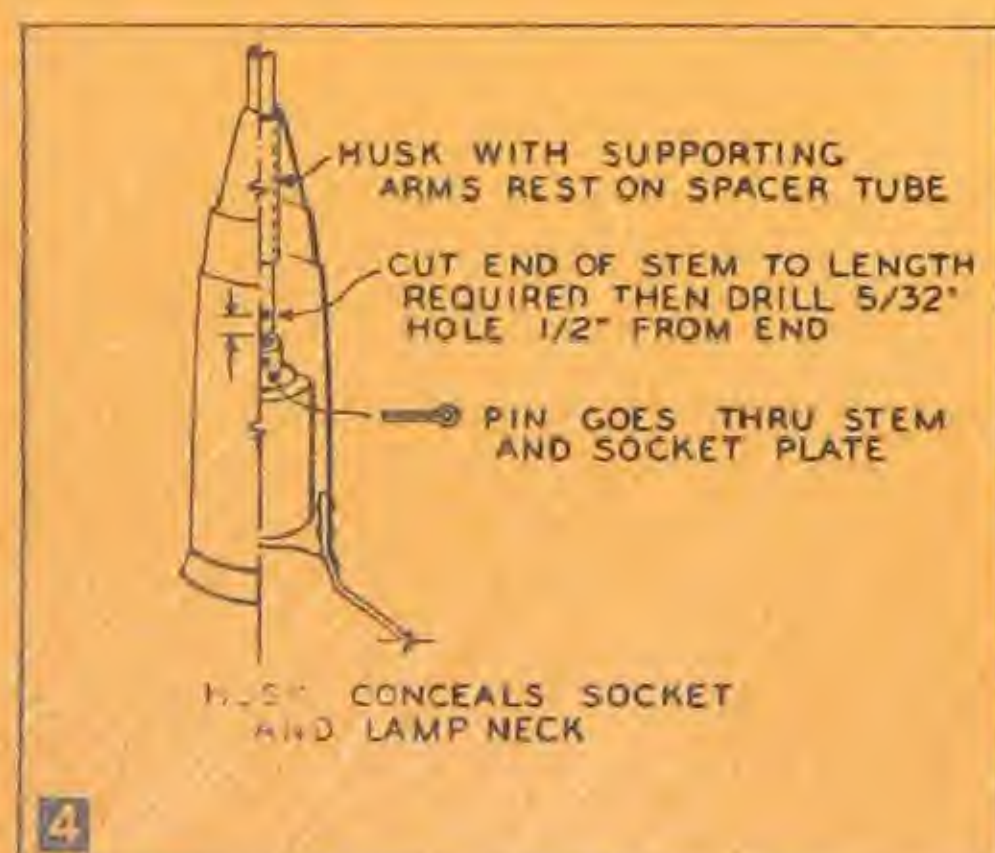
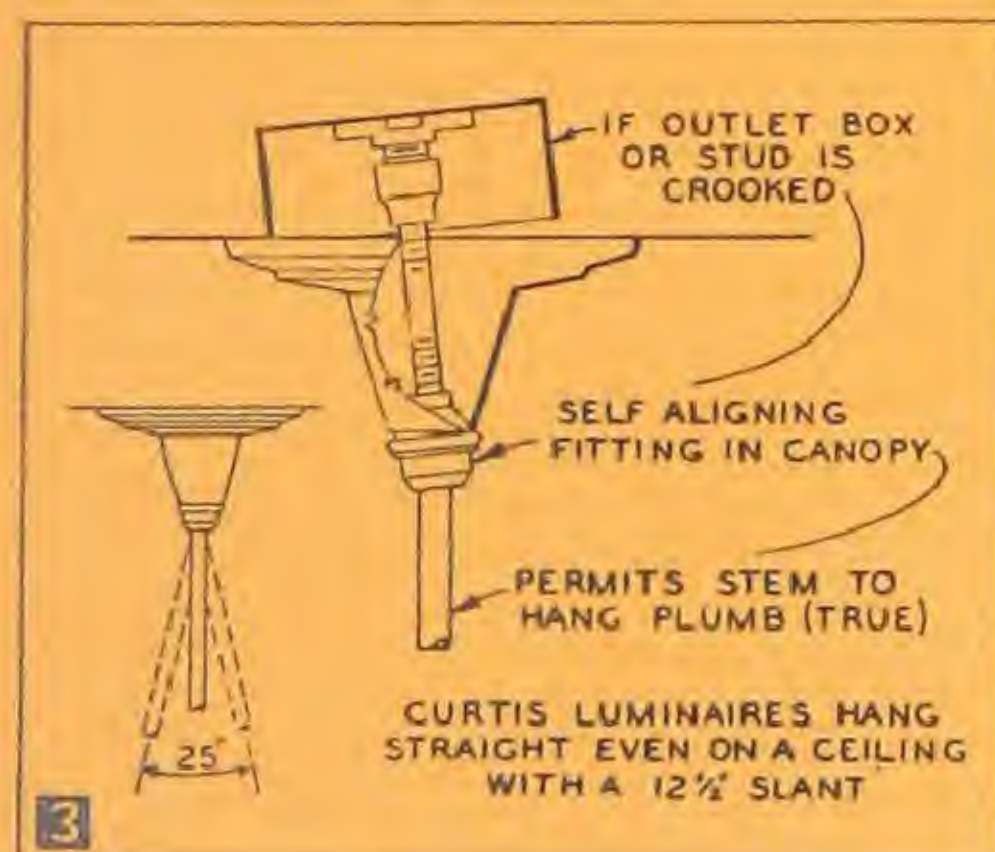
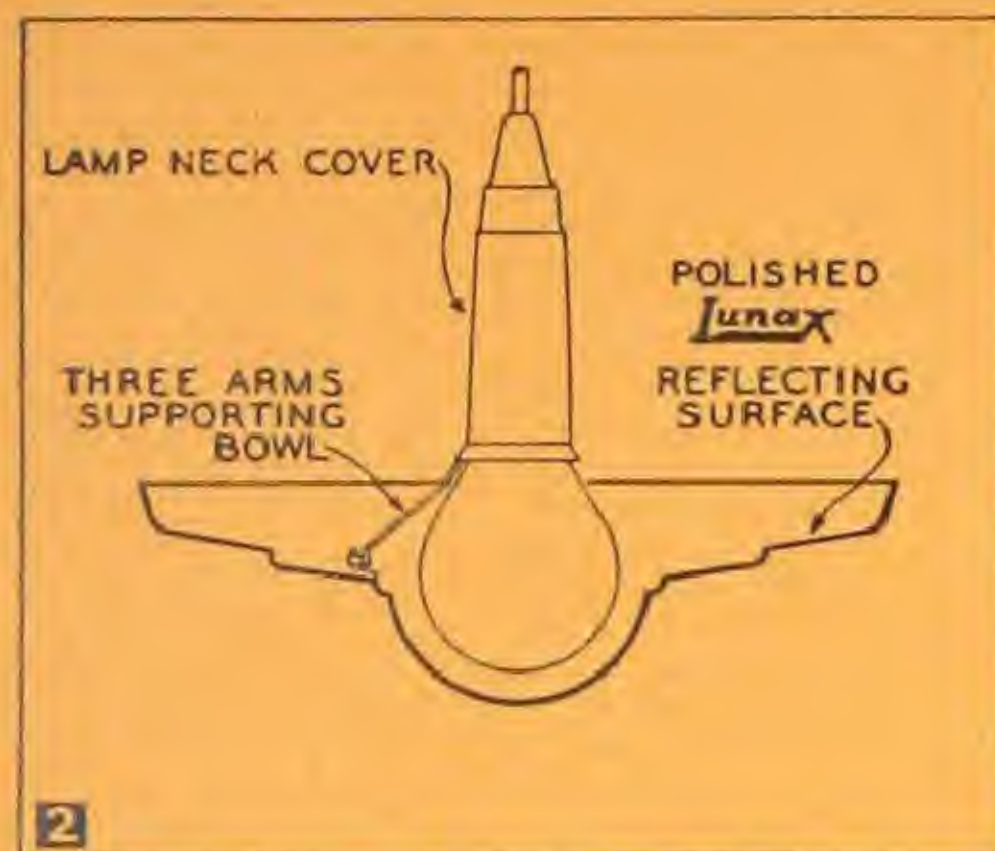
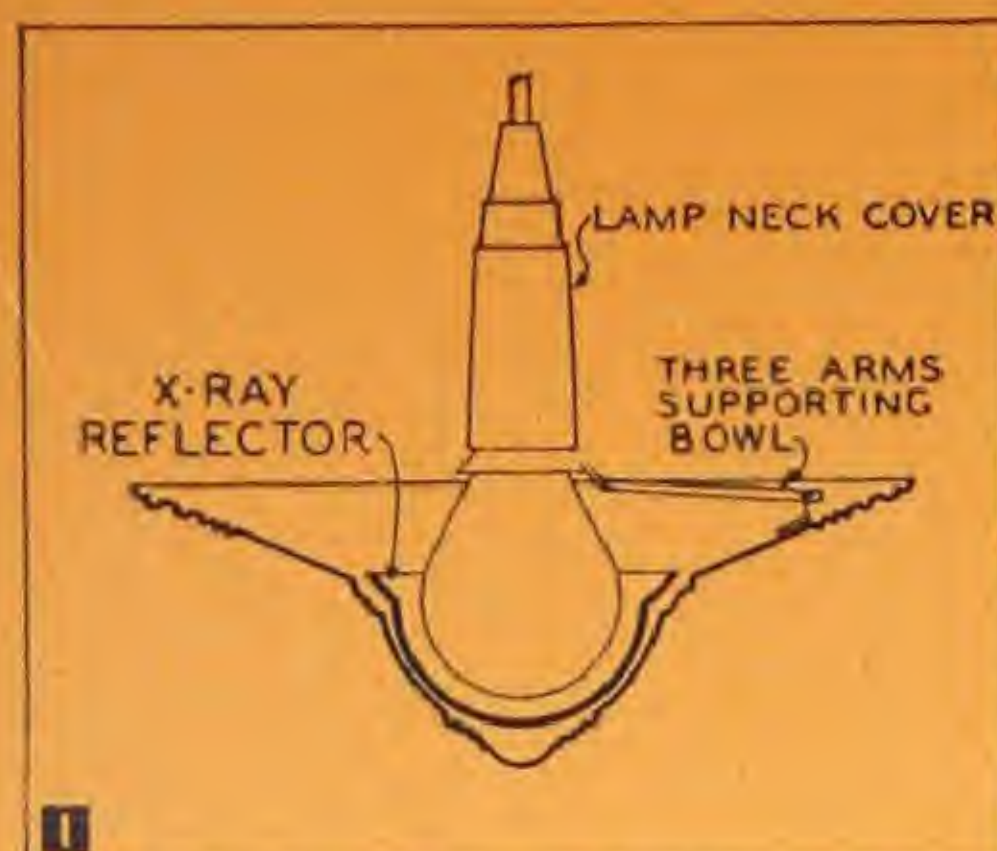
**LUNAX ALUMINUM
(ALZAK PROCESSED)**



SILVERED BOWL LAMP



General Information and Construction Data



Curtis luminaires are inherently superior in design, material, fabrication . . . individually high in lighting efficiency. Engineering features which augment these qualities, as well as minimize the cost and effort of installation and maintenance, are incorporated in each Curtis product. They will pass strict electrical inspection.

Typical luminaire construction is diagrammatically indicated in the accompanying drawings, 1, 2, 3, 4.

STEM HANGERS. The self-aligning fitting in the canopy—in all Curtis stem-hangers—permits the luminaire to hang straight (plumb) even if the outlet-box, or stud, is not level. Diagram facilitates understanding of how stem is easily shortened on the job without threading.

CANOPY SWITCH. Curtis pendant luminaires fitted with X-Ray Reflectors, except Cat. Nos. 5090, 5870, 5871 and 5872, have a knockout in the canopy. Other luminaires, including Cat. Nos. 5090, 5870, 5871 and 5872, require an extension ring when canopy switch is used. This extra equipment adds slightly to the cost and should be specified when ordered. These ring adapters are available in two sizes: For 200 to 500 watt pendant luminaires use Cat. No. 5057 (diameter 6 1/4", height 1"); For 750 to 1500 Watt pendant luminaires, use Cat. No. 5058 (diameter 8", height 1"). (Switch not included with these extension rings). See Diagram No. 5.

LAMPS AND SOCKETS. The voltage stamped on lamps should correspond with the voltage at the electrical supply socket for best lighting results from the respective luminaires. Lamp bulbs are **not** supplied by Curtis Lighting.

Adaptation of 750 to 1500-Watt Luminaire to 500-Watt Lamp. Where size of space to be lighted requires the largest size luminaires, but where only a 500-watt lamp is needed, an additional spacer, at the bottom of the stem hanger inside of the socket cover, serves to raise the socket cover and bowl so that the 500-watt lamp will be in the proper position. By removing the spacer, socket is brought to original position and larger lamps may then be used. Specify need of this spacer when ordering.

Three-Light Lamp: Where 500 or 350-watt (three-light) lamps are to be used, two-circuit socket and additional wire will be substituted at slight extra cost in place of usual Mogul socket, regularly supplied. Specify "with two-circuit socket for three-light lamp".

Medium Bipost Base Lamp: Cat. No. 5100 Luminaire is regularly supplied from stock for use with the T-24 Medium Bipost Base Lamp. Cat. Nos. 1250 and 1190 luminaires are available, assembled-to-order, for use with this lamp. Specify Cat. 1251 when "Edge-Ray" type is wanted . . . Cat. No. 1191 when "Trump" type is wanted . . . for use with this T-24 lamp.

Description of Finishes... General Specification Paragraphs

THE ATTRACTIVE FINISHES which are expertly applied on Curtis Luminaires are durable, protective, lasting. Finishes as applied to the luminaires in this Handbook are given with Catalog data for each unit.

Lacquer Enamel (Sprayed) Finishes

(Washable)

Ivorytone (45)... A light ivory finish which blends with ivory walls or ceilings. (See page 15).

Silver Grey (S)... Bright, high-grade, fine-grained Aluminum.

Dark Bronze (T)... A color similar to that of bronze statuary.

Golden Bronze (Q)... This same color is used on "Golden Armor" X-Ray Reflectors.

Bronzed Aluminum (V)... Similar to Aluminum with a slightly Bronzed tint.

Light Bronze (B)... A pale bronze similar to "bank" bronze.

Plated Finishes

Electroplated, and lacquered to protect surface against changes in color which would otherwise develop.

Antique Silvertone (44)... Two-tone brushed-nickel finish, shaded with a distinct grain and individuality.

Two-tone Bronze (43)... A popular two-toned shade of medium bronze.

Light Bronze (318-S)... Natural "bank" bronze (light color).

Satin Silvertone (46)... Brushed and lacquered cadmium on steel. The color and texture is like that of Aluminum.

Natural Finishes

Natural tone of the metal is retained

Etched Aluminum (50)... Etched, brushed, and lacquered.
Satin Aluminum (54)... Emeried Lunax surface. A distinctively grained finish.

Polished Aluminum (52)... Polished, brushed, lacquered.
Polished "Lunax" (53)... A very high-grade polished aluminum that is electrolytically processed to provide a clear, hard protective coating which is permanent.

Lustrous Aluminum (56)... Emeried surface, giving a lustrous appearance when lighted (Used on those luminaires featuring the "Edge-Ray" principle).

SUGGESTED SPECIFICATION PARAGRAPHS

Important points which should be considered in specifying or bidding on standard lighting equipment are covered by these general specifications. Their use is recommended to save time when writing specifications. General specifications such as these will usually follow the details covering quantities of material, etc.

GENERAL SPECIFICATIONS FOR INDIRECT PENDANT LUMINAIRES (Supports and Canopies for Curtis pendant luminaires should be specified as follows for all designs).

Supports for Pendant Luminaires using One Lamp:

The bowl shall be supported from the socket by three arms, any one of which is easily unhooked from the bowl allowing it to swing open on the other two arms for lamp replacement and for cleaning. ("L'Or-Ray" Luminaires are relamped through opening in bottom of bowl).

Canopy for Pendant Luminaires:

The canopy shall be made so it will slide down over the stem (or chain) by unscrewing a "canopy supporting-ring" to permit easy and quick lowering of canopy when installing and decorating.

1. WITH X-RAY SILVER MIRRORED REFLECTORS

a. Made of Steel

These shall have bowls made from cold rolled steel not less than .031" in thickness. They shall be heavily zinc-plated to resist rust before the enamel finish is applied. The exterior surfaces shall be finished in not less than two coats of a lacquer enamel which is washable and which will not check, crack, blister or peel under heat from the lamp. Each bowl shall be equipped with (an) X-Ray silver mirrored glass reflector(s) designed to produce the correct distribution of light over the ceiling area for indirect illumination.

b. Made of Brass

These shall have bowls made from brass (not less than 20 gauge B. & S.) plated in the finish specified. This is to have a coat of transparent lacquer.

Each bowl shall be equipped with (an) X-Ray silver mirrored glass reflector(s) for each lamp to produce the correct distribution of light over the ceiling area for indirect illumination.

c. Made of Aluminum

These shall have bowls made from aluminum not less than .040" in thickness. The exterior surfaces shall be finished as specified in either natural Satin Aluminum by etching, brushing and lacquering or in natural Polished Aluminum by polishing, brushing and lacquering. Each bowl shall be equipped with (an) X-Ray silver mirrored glass reflector(s) designed to produce the correct distribution of light over the ceiling area for indirect illumination.

2. WITH LUNAX (ALZAK) REFLECTING SURFACE

a. Made of Lunax Aluminum

These shall have bowls made from high-quality Aluminum sheets not less than .040" in thickness. The exterior surfaces shall be finished either in Satin Lunax or in Polished Lunax. The reflecting (inside) surface of the bowl shall be either diffuse or specular and both the reflecting and exterior surfaces shall be made permanent by a covering of hard, glasslike, transparent, colorless coat of aluminum oxide produced by the electrochemical "Alzak" process.

3. FOR USE WITH SILVERED BOWL LAMP

a. Made of Lunax Aluminum

These shall have bowls made from high-quality Aluminum sheets not less than .040" in thickness. The exterior surfaces shall be finished either in Satin Lunax or in Polished Lunax. The inside reflecting surface of the bowl shall be either diffuse or specular and both the reflecting and exterior surfaces shall be made permanent by a covering of hard, glasslike, transparent, electrochemical "Alzak" process. "L'Or-Ray" Luminaires shall be constructed so they may be relamped through opening in bottom of bowl without lowering bowl or swinging it open.



Planning Indirect Lighting

IT IS POSSIBLE here to give only concise information which will facilitate the planning of indirect lighting. Prospective users of Curtis indirect lighting are urged to contact Curtis Engineers and Designers in the preliminary stages of building or modernization planning. This early lighting consultation works to best advantage for all parties . . . avoiding improper installation and wiring expenses . . . insuring satisfactory illumination from appropriate equipment.

Following definitions are given for convenience:

Lighting Terms

"SIGHT-METER"—Light is measured by an instrument known as a "Sight-Meter", "Foot-Candle Meter" or "Illuminometer". The "Sight-Meter" shown at the right is a compact little instrument that instantly indicates the intensity of light in units called **Foot-Candles**.



"Sight-Meter"

CANDLE POWER—is the standard unit for measuring the intensity of light in any given direction—not used for measuring total light output, nor for rating large lamps.

FOOT-CANDLE—the standard unit for measuring the intensity of light on a surface. A burning candle placed one foot away from a surface will produce on that surface the light intensity of one foot-candle.

LUMEN—is the standard unit for measuring the quantity of light . . . The total light output of lamps is expressed in lumens, and their efficiency in the number of lumens produced per watt of current consumed.

WATTS—Lamps are rated in watts to indicate the power they consume. The cost of operation is figured in Kilowatt Hours, one Kilowatt Hour being equal to the burning, for example, of one watt for 1000 hours or 100 watts for 10 hours.

Planning The Lighting

The **first** step in planning any lighting installation is to correctly determine the lighting intensity in foot-candles desired in the interior. This selection for a particular installation will depend upon actual purposes and conditions for which the interior is to be used. Accuracy and minuteness of business and industrial operations, color of materials worked on or handled, merchandising exigencies, and other factors affect the determination of correct lighting level.

Recommended Foot-Candles of Illumination

(More detailed recommendations made on request)

Art Galleries	Club and Directors'
General 10	Rooms 10-50
Auditoriums 5-10	Corridors, Halls, etc. 5
Bank—Lobby 20	Display Rooms
Barber Shops and	Automobile 10-20
Beauty Parlors 15-25	Furniture 20-30
Churches 5-15	

(continued)

Hospitals—Wards 30-50	Restaurants 10
Laboratories 20	Displays 30-50
Hotels 10-30	Schools
Libraries 30-50	Class Rooms 20-30
Museums—General 10	Sight Saving Classes . . . 30-50
Exhibits 30-50	Stores 20-50
Offices—General Space . . . 10	Theatres 5-15

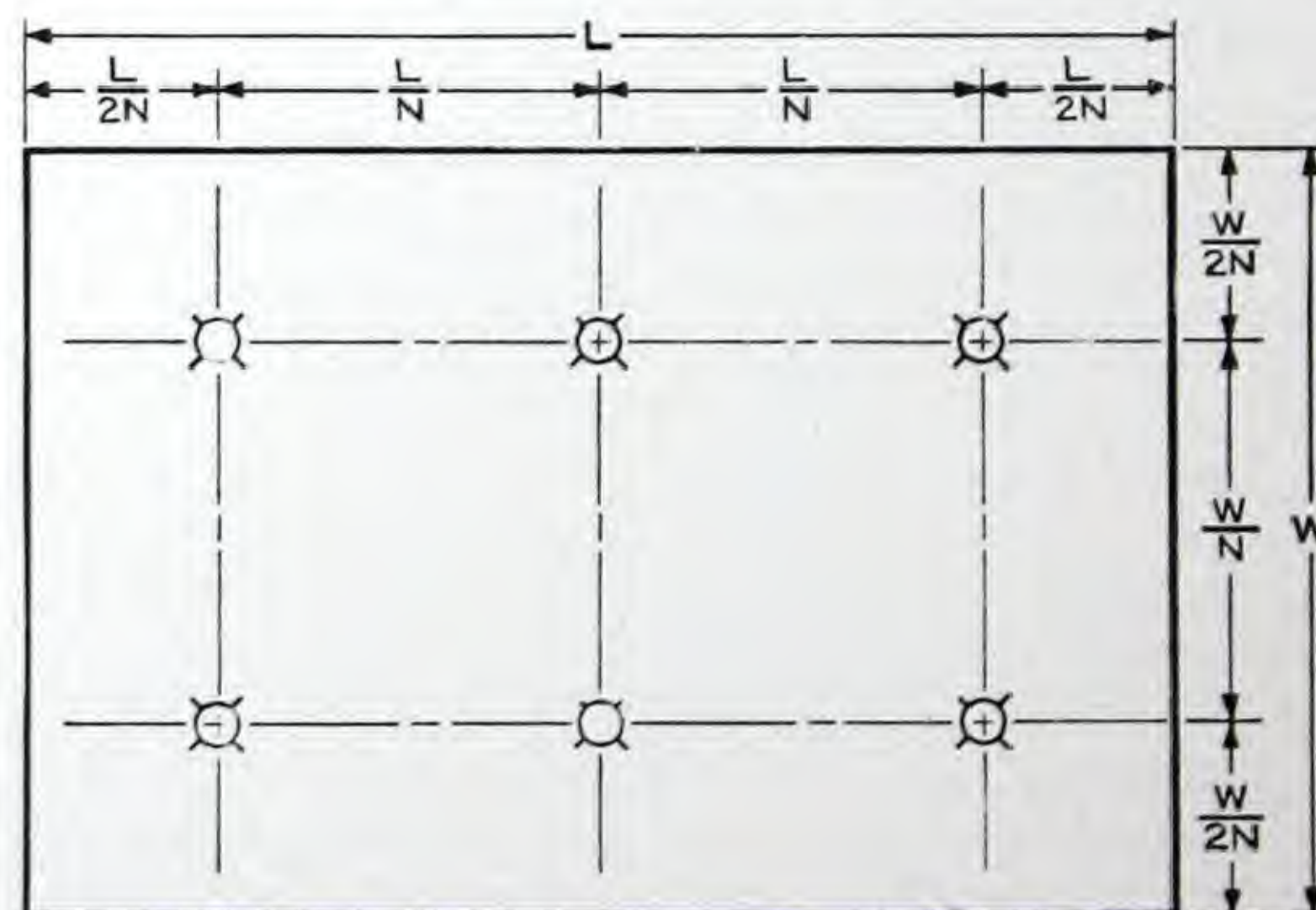
Determining outlet location and wattage

Second—from floor plan of room to be lighted find area arrangement of outlets and determine wattage per outlet. The architectural features . . . columns, bays, beams, etc. . . will generally determine location of outlets. Areas indicated below are largest that should be lighted from one pendant luminaire.

Recommended Foot-Candles of Illumination

Average Area per Outlet in Square Feet	Ceiling Height	Watts per Outlet to Produce		
		6 to 10 Foot-Candles	10 to 15 Foot-Candles	15 to 25 Foot-Candles
81	9 ft.	...	200	300
100 to 144	9'5" to 11'0"	200	300	500
169 to 225	11'5" to 15'0"	300	500	750
256	16 ft.	500	750	1000

The following formulas indicate the desirability of having the space between outlets as near equal as possible.



N=Number of fixtures in a row.

L=Length of room; **W**=Width of room.

W/N and **L/N** should be as near equal as possible. Neither **W/N** nor **L/N** should exceed $1\frac{1}{4}$ ceiling height.

Planning Indirect Lighting



Length of Hanger for Various Ceiling Heights

The regular suspension (length of hanger) is indicated for each luminaire. If necessary, this can be easily shortened on the job. (Curtis stem hangers require no threading). Longer hangers supplied when required at slight extra cost.

Ceiling Height of Room	Suspension . . . Top of Bowl to Ceiling
9'	24"
10'	28"
12'	36"
14'	36"
15'	42"
16'	42"

Color of Ceiling

For best lighting results the color of the ceiling should be mat finish Ivory, White, or Light Cream. The upper walls should preferably be light in color as this has a direct bearing on the efficiency of the lighting system. The following table indicates percentages of light reflected by various colors.

Color	Reflection Factors	Color	Reflection Factors
Flat White	82%	Light Gray	60%
Ivory-White	78%	Light Green	55%
Cream	74%	Buff	55%
Caen Stone	70%	Tan	40%
Ivory Tan	65%	French Gray	35%

Avoid Lighting Losses—Provide Adequate Wiring

Every 1% drop in voltage at lamp socket decreases light output of lamp about 3.5%. This means an increase in the cost of the light delivered, hence these suggestions:

- (1) Lamps used should be rated at voltage corresponding to that at the lamp socket.
- (2) The initial capacity of branch circuits should be sufficient to fit each socket with lamp of higher wattage (for higher intensity of illumination if needed later on) without overloading the circuit.
- (3) For runs of more than 50 feet from the panel board to the first outlet, No. 10 wire should be used and No. 12 between outlets. Panel boards should be relocated or additional ones added if the run exceeds 100 feet from the panel board to first outlet. Where such runs cannot be avoided No. 8 wire should be used. Long runs are not practical.

Appliques or Portable Luminaires

When planning general indirect lighting using Appliques (wall brackets) or Portable luminaires the wattage should be approximately one to one and one-half times that specified for pendant fixtures under like conditions . . . see preceding data. Spacing between units will depend on local conditions . . . interior furnishings, partitions, wall surfaces available, etc.





THE CURTIS ORGANIZATION



THE FAR-REACHING influence exerted by Curtis Lighting in the lighting equipment field is evidence of the highly developed manufacturing facilities and outstanding personnel of the organization. Curtis Lighting's Engineering and Designing Departments are composed of men individually competent and experienced in artistic and scientific illumination.

In All Principal Cities

Curtis Lighting Representatives are located in all principal cities of the United States. Consult local directory for our representative or write to main office at Chicago for location of nearest Curtis Representative.

Abroad

In addition to the main plant in Chicago, Curtis Lighting factories and sales offices are established in Toronto, Paris, Antwerp, London.

International General Electric Company acts as Agent for Curtis Lighting products, in foreign countries (excepting European) and they have Representatives in Principal Cities.

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Curtis Lighting products are manufactured to meet the requirements of the Underwriters Laboratories, Inc.

Curtis Lighting

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CHICAGO

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Engineers in the Principal Cities

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CCA

LIGHTING . . . designed for seeing, has been advanced by the ever-increasing knowledge of the requirements of vision. Improved and new materials and methods in the manufacture of high quality lighting equipment on a quantity basis have placed "Eye-Comfort" lighting within the reach of everyone.

* * *

. . . four decades have been devoted by Curtis Lighting exclusively to the design, engineering and manufacture of lighting equipment intended to beautify surroundings as well as to afford eye-comfort. The superior quality of this equipment has merited its selection for prominent installations throughout the world.